Nebraska Air Quality Construction Permit Application

APPLICATION COVER SHEET AND CHECKLIST.



RECEIVED

Department of Environmental Quality
Air Quality Division – Construction Permit Unit
P.O. Box 98922, Lincoln, NE 68509-8922
CHECK 877-834-0474 or 402-471-2189
http://www.deq.state.ne.us

	EDEO FEB 1.4 2013	CHECK 87	77-834-0474 or 402-471-21 http://www.deq.state.ne.	.us
•	Name: AltEn, LLC Nebraska Dept of Environmental Quality By: DEQ# 195 By: DEQ# 195	. 1, 25	Date: January 2013	
<u>IMPOR</u>	TANT: PLEASE READ THE GENERAL INSTRUCTION)NS AT THE END	OF THIS COVER SHEET	
	ications must also include this completed cover sheet and cor on forms/sections are being included with this Construction			
	*- Form 1.0 - 4.0 MUST be completed for each construction ill make the application incomplete and delay the permitting			the
\boxtimes	FORM 1.0 – Application General Information			
	FORM 2.0 – Air Dispersion Modeling Information SECTION 2.1 – Emission Point Summary SECTION 2.2 – Point Source Information SECTION 2.3 – Volume Source Information			-
	FORM 3.0 – Pollutant Emissions Summary SECTION 3.1 – Pollutant Emissions Summary (lb/hr) SECTION 3.2 – Criteria Pollutant Emissions Summar SECTION 3.3 – Hazardous Air Pollutant Emissions S SECTION 3.4 – Greenhouse Gas Emissions Summary SECTION 3.5 – Greenhouse Gas Emissions Summary SECTION 3.6 – Carbon Dioxide Equivalent Summary	ry (tons/yr) Summary (tons/yr) y (lb/hr) y (tons/yr)		,
	FORM 4.0 – Applicable Federal Requirements SECTION 4.1 – New Source Performance Standard (INSTRUCTION 4.2 – National Emission Standards for Hazel SECTION 4.3 – Prevention of Significant Deterioration	zardous Air Pollutant	(NESHAP) Requirements	
	FORM 5.0 – Facility Specific Information SECTION 5.1 – Grain Handling SECTION 5.2 – Mineral Processing SECTION 5.3 – Ethanol Production			

SECTION 5.4 – Concrete Batch Plant SECTION 5.5 – Asphalt Production SECTION 5.6 – Surface Coating

SECTION 5.8 – Biodiesel Production SECTION 5.9 – Fiberglass Manufacturing

SECTION 5.10 - {Reserved}

SECTION 5.7 - Natural Gas and Propane Production

Nebraska Air Quality Construction Permit Application APPLICATION COVER SHEET AND CHECKLIST.

		-Continued on Next Page-
\boxtimes	FOR	M 6.0 – Emission Sources SECTION 6.1 – External Compustion Units
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	同	SECTION 6.2 – Internal Combustion Units
		SECTION 6.3 – Incinerators
		SECTION 6.4 – Uncontrolled Emission Points
	$\overline{\boxtimes}$	SECTION 6.5 – Controlled Emission Points without Combustion
		SECTION 6.6 – Controlled Emission Points with Combustion
	\boxtimes	SECTION 6.7 – Storage Tanks
	\boxtimes	SECTION 6.8 – Cooling Towers
•	\boxtimes	SECTION 6.9 – Haul Roads
	\boxtimes	SECTION 6.10 – Equipment Leaks
		SECTION 6.11 – Storage Piles
\boxtimes	FOR	M 7.0 – Emission Control Devices
	\boxtimes	SECTION 7.1 – Combustion Flare
		SECTION 7.2 – Thermal Oxidizer (TO)/Regenerative Thermal Oxidizer (RTO)
	\boxtimes	SECTION 7.3 – Baghouse/Cyclone
	\boxtimes	SECTION 7.4 – Scrubber

Nebraska Air Quality Construction Permit Application APPLICATION COVER SHEET AND CHECKLIST

App	plication Completeness Checklist (must be completed for all applications):
	The application <u>does not</u> include any confidential information and no application materials are marked confidential. (Pay particular attention to drawings, figures, diagrams, and specification sheets from manufacturers, as these are the most often overlooked materials that have "confidential" stamped on them.)
ъ. 🗌	The application <u>does</u> include confidential information and the appropriate request for confidentiality in accordance with Title 115 – Rules of Practice and Procedure is provided. Refer to the NDEQ Guidance Document titled "Air Quality Confidentiality Claims" available on our website for more information.
c. 🖂	The application is typed or filled out using a black or blue pen.
d. 🖂	The original application is signed and dated by the responsible official. (Section 1.1)
e. 🛚	The relevant sections have been duly marked on the front page of this form and filled out completely to the best of my ability (If you are unsure as to which sections pertain to your facility, please contact the NDEQ).
f. 🛚	Instructions for each section have been read thoroughly (If you are unsure as to what information is needed, please contact the NDEQ).
g. 🛚	Emissions calculations – calculations of potential emissions (controlled and uncontrolled) of all regulated air pollutants have been provided, with all supporting documentation included and units clearly defined. Include emission factors and their source (i.e. AP-42, FIRE, etc).
h. 🖂	Application Fee of the proper amount is enclosed. (Section 1.1)
i. 🖂	Air pollution control equipment for each emission point is identified and described. (Section 2.1)
j. 🛛	Emission point/stack data is identified and described.
k. 🔀	Plant Diagram shows heights and locations of all buildings, property boundaries and location of all stacks and emission points.
1. 🖂	Detailed Project Summary clearly outlines the intent and processes at the facility. (Section 1.1)
m,	Ambient Air Quality Analysis is provided, including the modeling data and results, where required (see Modeling Guidance or contact NDEQ). If an analysis is not provided, include an explanation for why it wasn't
n. 🗀	Application is for a Prevention of Significant Deterioration (PSD) permit

o. One (1) original and two (2) copies (3 copies for PSD applications) of the complete application have been sent to the proper address. If an electronic version of the application is submitted, only one hard-copy original and one hard-copy copy are required regardless of application type.

p. Additional information not identified on application forms is included and clearly identified.

I have completed this application cover sheet and completeness checklist and can attest that the accompanying construction permit application materials are complete to the best of my ability. In completing this form, I understand the following: That if any of the required information is not included in this application submittal, the application will be placed in a suspended file until the Department receives the necessary materials and information; That my completion of this Cover Sheet and Checklist does not assure this is a complete application and the Department may request additional information to complete the permit; That by checking the box indicating this application does not include confidential information, the application will be placed in the public files and be subject to public review; and, that the application review will not commence until all required information is received and the application is determined to be complete.

Jim Stewart / M Stewart / Date Of Application Preparer Date

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Department of Environmental Quality
Air Quality Division – Construction Permit Unit
P.O. Box 98922, Lincoln, NE 68509-8922
877-834-0474 or 402-471-2189
http://www.deq.state.ne.us

NDEO U	SE ONLY
Amount Paid:	,
Check #:	
Receipt #:	
Application #:	

Nebraska Air Quality Construction Permit Application Form 1.0: Construction Permit Application General Information

Section 1.1. AQ Construction I et mit General Info	1 mation
IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING DO NOT use pencil to fill out this application. Please type responses.	
Administrativ	ve Information
1) Facility Name: AltEn, LLC	2) NDEQ Facility ID#: 84069
3) Facility SIC Code(s): 2869	4) Facility NAICS Code(s): 325193
5) Facility Description: Fuel Ethanol Production Facility	
6) Facility Physical Address: 1344 County Road 10	
7) Facility City: Mead	8) State: Nebraska 9) Zip: 68041
10) County: Saunders ¼ ¼ Sec	tion: 12 Township: 14N Range: 08E
11) Indicate the adjacent states that the facility is located within Colorado Iowa Kansas Missouri South	
13) Company Name: AltEn, LLC	4"
14) Company Mailing Address: 1344 County Road 10	
15) Company City: Mead	6) State: NE 17) Zip: 68041
18) Is The Business Incorporated? No Yes, State of	Incorporation:
Contact In	nformation
19) Facility Contact Person: Jim Stewart	
20) Facility Contact Person's Title or Responsibility: Plant Ma	inager
l '	3) Fax Number: 4) Email Address: jstewart@mrgkc.com
25) Who is the Primary Contact for Application-related Question	ons?: Facility Contact Other (fill in 25-30 below)
26) Primary Contact Name: Andrea Foglesong	
27) Primary Contact Company: ERI Solutions, Inc.	
,	0) Fax Number: (316) 927-4266 1) Email Address:
32) Hard-copy drafts and the final permit documents should be	sent to: Facility Contact Other (fill in 32-37 below)
33) Document Recipient's Name and Title: Jim Stewart, Plan	t Manager
34) Document Recipient's Mailing Address: 1344 County Ros	nd 10
35) Document Recipient's City: Mead 3	6) State: NE 37) Zip: 68041
Construction Pern	nit Fee Information
38) Construction Permit Application Fee Enclosed (see instruc Make check payable to: Nebraska Department of Envir Memo: Air Quality CP Applica	onmental Quality



Air Quality Construction Permit Application Form 1.0: Application General Information

FACILITY NAME: <u>A</u>	ltEn, LLC	DATE: January 2013
NDEQ Facility ID#: 84	069	
Section 1.1: AQ Con	nstruction Permi	t General Information (continued)
	Pr	oject Information
39) This Application is For: (Check One)	b. Modification of c. Significant Revision	on Permit for a New Facility an Existing Facility sion of an Existing Construction Permit(s) #: ruction/Modification
40) Projected Date to Begin A	ctual Construction: N/A	41) Projected Date of Startup: ASAP
42) Estimated Cost of Project	: N/A	· .
•	Historical Perm	nitting Information N/A
43) What year was the facility	originally constructed?	2005
44) Enter the date the most re-	cent Air Quality Constru	ction Permit was issued (mm/dd/yyyy):
45) Provide a brief summary	of each modification belo	ow (Attach additional sheets if needed):
Date of Modification	Date Permitted	Summary of Modification
2010	2011	Change of Ownership
2007	2007	Change of Ownership
		ource Information
46) Is the <u>existing</u> source clas		purce Information tion of Significant Deterioration (PSD) Source? Yes No
47) Is this project subject to P	sified as a Major Preven	s No If Yes, complete Section 4.3
47) Is this project subject to P 48) Is the project subject to St	sified as a Major Prevents SD Review?	tion of Significant Deterioration (PSD) Source? Yes No was No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis
47) Is this project subject to P	sified as a Major Prevention SD Review?	tion of Significant Deterioration (PSD) Source? Yes No ments in Chapter 27? Yes No If Yes, attach T-BACT analysis rements? Yes No If Yes, complete Section 4.2
47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N	sified as a Major Prevention SD Review?	tion of Significant Deterioration (PSD) Source? Yes No s No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis irements? Yes No If Yes, complete Section 4.2 tation of Citizenship
47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N 50) Is this application being s	sified as a Major Prevention SD Review?	tion of Significant Deterioration (PSD) Source? Yes No ments in Chapter 27? Yes No If Yes, attach T-BACT analysis rements? Yes No If Yes, complete Section 4.2
47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N 50) Is this application being s 51) Is the applicant a citizen	sified as a Major Prevention SD Review?	tion of Significant Deterioration (PSD) Source? Yes No s No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis irements? Yes No If Yes, complete Section 4.2 tation of Citizenship
47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N 50) Is this application being s 51) Is the applicant a citizen 10 11 12 13 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	sified as a Major Prevention SD Review? Yestate toxic BACT Require ESHAP or MACT Require Attes submitted on behalf of a of the United States. Indicate the Feder	tion of Significant Deterioration (PSD) Source? Yes No s No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis irements? Yes No If Yes, complete Section 4.2 tation of Citizenship in individual (if Yes go to 51, NO go to 52) Yes No
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47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N 50) Is this application being s 51) Is the applicant a citizen of the subject to St Is the applicant is a qualif (applicant must provide in the subject to St I. certify under penalty of law information contained in this all copies, including the elect	resified as a Major Prevention SD Review? Yestate toxic BACT Require ESHAP or MACT Require Attes Submitted on behalf of a submitted on behalf of a submitted alien under the Feder numigration status, alien residuality and information and information and information copy, of this application copy, of this application.	tion of Significant Deterioration (PSD) Source? Yes No No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis irements? Yes No If Yes, complete Section 4.2 tation of Citizenship n individual (if Yes go to 51, NO go to 52) Yes No Yes No I Yes No Official Certification Statement on and belief formed after reasonable inquiry, the statements and Permit application are true, accurate, and complete. I also certify that atton are identical in content to the original.
47) Is this project subject to P 48) Is the project subject to St 49) Is the Source subject to N 50) Is this application being s 51) Is the applicant a citizen Is the applicant is a qualif (applicant must provide in	resified as a Major Prevention SD Review? Yestate toxic BACT Require ESHAP or MACT Require Attes Submitted on behalf of a submitted on behalf of a submitted alien under the Feder numigration status, alien residuality and information and information and information copy, of this application copy, of this application.	tion of Significant Deterioration (PSD) Source? Yes No S No If Yes, complete Section 4.3 ments in Chapter 27? Yes No If Yes, attach T-BACT analysis irements? No If Yes, complete Section 4.2 tation of Citizenship In individual (if Yes go to 51, NO go to 52) Yes No Yes No Yes No Yes No Yes No Yes No No Official Certification Statement On and belief formed after reasonable inquiry, the statements and Permit application are true, accurate, and complete. I also certify that atton are identical in content to the original. Its Date (mm/dd/yyyy):



Air Quality Construction Permit Application Form 1.0: Application General Information

FACILITY NAME:	AltEn, LLC DATE: January 2013
NDEQ Facility ID#:	
	0.000

Section 1.1: AQ Construction Permit General Information (continued)

53) Project Description (attach directly behind this page)

<u>For New Facilities</u>: On a separate sheet(s) of paper, provide a detailed narrative of the proposed construction at the facility. This should include all emission units, processes, and pollution control equipment being constructed. The descriptions must be complete and particular attention must be given in explaining all stages in the process that may result in a discharge of any air pollutant. All obtainable data must be supplied concerning the nature, volume, particle size, weights, chemical composition and concentrations of all types of air pollutants that are expected to be emitted by the source. All emission point, emission unit, and control equipment identification numbers should be present in this description appropriately.

For Existing Facilities: On a separate sheet(s) of paper, provide a detailed narrative of the production, operations, processes, and emission units that currently exist at the facility. This should include all emission units, processes, and pollution control equipment that are currently in operation. The descriptions must be complete and particular attention must be given in explaining all stages in the process where there is a discharge of any air pollutant. All obtainable data must be supplied concerning the nature, volume, particle size, weights, chemical composition and concentrations of all types of air pollutants that are emitted by the source. In addition to existing information, narrative of the proposed construction/modification occurring at the source must also be discussed with emphasis on the additions/changes occurring. The same information presented for the existing sources should also be provided for the new construction/modification. Ensure that the narrative is clear as to what is new, existing, and/or being modified. All emission point, emission unit, and control equipment identification numbers should be present in this description appropriately.

54) Facility Layout Diagram(s)

On a separate sheet(s) of paper, provide a detailed diagram or site drawing that includes all new and existing buildings, stacks, and emission points identified in this application. Make sure all elements of the drawing are properly identified, drawn to scale, and are consistent with other sections of this application. The plant diagram should indicate the height and location of all buildings/structures and property boundaries. Fences or other public access restrictions should be identified and described. Clearly indicate which elements currently exist and which will be built/installed/modified. Area maps should generally be 1"=500' and detail maps should generally be 1"=50'. An aerial photo with the facility boundary overlay works well in showing the surrounding land use. (See Sample Plant Layout Diagram for an example)

55) Process Flow Diagram(s)

On a separate sheet(s) of paper, provide a flow chart that includes all processes, process equipment, emission units, stacks, air pollution control equipment, and fuel burning equipment identified in this application. When finished, this diagram should show how products and materials (including fuel) flow through each process. Make sure all units are identified and properly cross-referenced to match other Sections of the application (including existing units). Provide an inclusive date from which the diagram is valid. Clearly indicate which elements exist and which are new. (See <u>Sample Process Flow Diagram</u> for an example of this document)

56) Air Dispersion Modeling Information

Modeling Guidance for determining whether air dispersion modeling may be required can be found on the NDEQ website, or contact the Department for assistance. Please fill out Form 2.0, Sections 2.2 and 2.3 to provide modeling-related information whether or not modeling is submitted to the Department. **Not Applicable**

Note: If air dispersion modeling is required but not included with this application, please provide complete modeling submittal and modeling checklist within 30 days to avoid delays in processing this permit application. A delay in submitting the modeling can result in the application being placed on hold and the Department cannot guarantee work will resume immediately upon receipt of modeling. One original and two copies of the modeling submittal are required.

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PROJECT DESCRIPTION

AltEn, LLC Air Construction Permit Modification Application From the Nebraska Department of Environmental Quality

Facility Name:

AltEn, LLC

Facility ID Number - 84069

SIC Code:

2869; Industrial Organic Chemicals Not Elsewhere Classified

NAICS Code:

325193; Ethyl Alcohol Manufacturing

Source Location:

1344 County Road 10

Mead, Nebraska

Physical Location:

Section 12, Township 14 North, Range 08 West

Saunders County

Operating Schedule:

All processes operate continuously, 24 hrs/day, 365 days/yr, except for

scheduled maintenance.

Facility Contact:

Jim Stewart

Plant Manager, AltEn, LLC

319-360-2127

jstewart@mrgkc.com

Technical Contact:

Andrea Foglesong

Managing Director, Environmental Affairs, ERI Solutions, Inc.

316-927-4260

Andrea.Foglesong@erisolutions.com

CONSTRUCTION PERMIT MODIFICATION APPLICATION

AltEn, LLC owns and operates a 24.1 million gallon denatured ethanol plant located in Mead, Saunders County, Nebraska. An air quality focused evaluation was conducted at AltEn on January 5, 2012 by the Inspection and Compliance Unit of NDEQ, which required AltEn to modify their existing permit to include discrepancies discovered during the evaluation. Therefore, AltEn is submitting this air permit application for certain existing plant processes and equipment that was not included in the original permitting. The equipment not included in previous permits is identified in the "Air Emissions Units Technical Specification" section in this application documentation. Additionally, the NDEQ evaluation had several points addressing findings of the onsite inspection. These points are addressed in the "Findings of the NDEQ Air Quality Evaluation Performed on January 5, 2012" section in this application documentation. Grain (mainly corn) will continue to be the primary raw material and the facility will keep the ability to produce wet distiller's grains and solubles (WDGS) for animal feed. However, the facility would like to

incorporate milo as a feedstock as well as the possibility of other feedstocks depending on availability. The facility will provide the necessary notifications or modifications if a different feedstock is to be incorporated into facility operations. The facility is located adjacent to a cattle feedlot. Manure from the feedlot, as well as thin stillage and wastewater from the ethanol plan is converted into biogas in an anaerobic digester and will be used as fuel in the ethanol plant's boilers.

FACILITY BACKGROUND

The facility was issued their initial construction permit in January 2005 under the name Nebraska BioClean. A construction permit modification was issued in 2007 which changed the facility's name to E³ BioFuels — Mead, LLC. The facility was then sold to AltEn, LLC after bankruptcy in 2010 at which point AltEn requested all permitting for the facility be transferred into their name.

The United States Environmental Protection Agency (EPA) presently considers fuel grade ethanol manufacturing facilities to be "chemical processing plants". This permit application will propose federally enforceable conditions that limit emissions of PSD criteria air pollutants to below the major source threshold of 250 tons per year. Emission offset requirements or mitigation will not be triggered as the plant is carefully engineered to emit at rates below PSD de minimus triggers as a synthetic minor source of air contaminants. The permit requires use of control equipment that will limit the emission of hazardous air pollutants (HAP) to less than the HAP major source thresholds of ten (10) tons per year for a single HAP and twenty-five tons (25) per year for any combination of HAPs.

Emissions estimates of particulate matter (PM), PM with an aerodynamic diameter less than or equal to ten microns (PM10), PM with an aerodynamic diameter less than or equal to 2.5 microns(PM2.5) oxides of nitrogen (NO_x), carbon monoxide (CO), oxides of sulfur (SO_x) and volatile organic compounds (VOCs) are provided. Continued operation of the facility is subject to the provisions of NDEQ Rules and Regulations.

FINDINGS OF THE NDEQ AIR QUALITY EVALUATION PERFORMED ON JANUARY 5, 2012

Below is a list of potential permitting concerns identified as a result of the inspection that are addressed in this permit application.

- 1. The replacement for boiler B-2 (damaged by an explosion) should be evaluated by the Permitting Section to ensure it meets the sizing of the original construction permit.
 - The, boiler was replaced with a 1,200 BHP (~40.14 MMBtu/hr) boiler which is addressed in this permit modification application.
- 2. The auxiliary boiler should be evaluated for inclusion in the construction permit modification.
 - The Auxiliary boiler (EP-15) is included in this permit modification application.
- 3. You must have as-built drawings available for review by inspectors.
 - AltEn is currently in the process of obtaining as-built drawings.

4. Remove from the construction permit the 275 HP diesel engine.

The emergency fire water pump engine is an electric unit and does not combust diesel. AltEn, LLC requests the engine is removed from the permit.

The scalper/day tank baghouse should be considered for inclusion in the construction permit.

The scalper/day tank Baghouse (EP-2) is included in this permit modification application.

6. Construction permit condition XIII(b)(1) should be considered for modification to identify the correct type of grain cleaning equipment at the site.

This permit modification identifies the correct type of equipment the facility has onsite.

7. Construction permit condition XIII(b)(1) should be considered for modification to correctly identify the equipment controlled by the mill baghouse, EP-3.

This permit modification identifies the correct type of equipment the facility has onsite.

8. The installation of an RTO must be evaluated for construction permit requirements prior to installing the unit.

Consideration of a RTO is being recommended by the NDEQ due to failing test results at the ethanol absorber (EP-6) from the testing completed on October 2007. However, AltEn feels it is extremely important to explain that the previous testing was not conducted under the most ideal circumstances. Operations at the plant were inconsistent around the time the testing was completed and does not reflect normal operations at the facility. The facility proposes completing stack testing on the ethanol absorber after the facility resumes operation and a steady state is achieved. If emissions from the ethanol absorber are not demonstrating compliance with permitted limits with consistent operations and water flow, the facility will utilize chemical additive to increase the absorption of certain VOC and HAP chemicals. AltEn would like the opportunity to exhaust operational options prior to committing to the expense of installing a RTO.

9. Obtain a current site diagram identifying the re-plotted site boundaries, ownership and the location of all facility equipment and emissions points.

AltEn is currently in the process of obtaining current site diagram identifying the re-plotted site boundaries, ownership and the location of all facility equipment and emission points.

AIR EMISSION UNIT TECHNICAL SPECIFICATIONS

The following equipment is currently at the facility for which this permit modification application will include:

1. **Grain Processing Facilities:**

a. Receiving and unloading equipment with one (1) grain storage silo with a capacity of

200,000 bushels.

- b. One day bin with storage capacity of 5,000 bushels, one (1) scalper and one (1) hammermill.
- c. Equipment necessary for loading wet distiller's grains and solubles (WDGS) into trucks/containers for shipment off-site.
- 2. <u>One (1) Ethanol Manufacturing Plant</u>: storage tanks, various pumps, piping and valves, fermentation process vessels, ethanol absorber, distillation units, molecular sieves, condensers, centrifuges, evaporators, and product loadout.

Specific plant equipment:

- a. One (1) 54.0 MMBtu/hr and one (1) 49.59 MMBtu/hr Boilers: for the purpose of producing steam requirements of the facility. Each boiler can operate on a combination of biogas and natural gas or on each fuel alone. Two (2) 54 MMBtu/hr boilers are currently permitted for this facility. One of the boilers were damaged and replaced with the 49.59 MMBtu/hr boiler, which was not previously permitted. The combined combustion for the boilers will be limited to 66 MMBtu/hr or 578,160 MMBtu/year.
- b. One (1) 20 MMBtu/hr Auxiliary natural gas fired Boiler: for the purpose of providing a backup unit for steam generation. The Auxiliary back-up boiler was not previously permitted. The Auxiliary boiler is expected to operate no more than 2,000 hours per year.
- c. Two (2) Tanks 22,600 Gallons (ea): each (15.5' dia. x 16' high) for the purpose of storing anhydrous ethanol. Each tank is equipped with a fixed roof that meets the applicable requirements of 40 CFR Part 60, Subpart Kb.
- d. One (1) Tank 22,600 Gallons: (15.5' dia. x 16' high) for the purpose of storing 190 proof (95%) ethanol. The tank is equipped with a fixed roof that meets the applicable requirements of 40 CFR Part 60, Subpart Kb.
- e. One (1) Tank 22,600 Gallons: (15.5' dia. x 16' high) for the purpose of storing denaturant (natural gasoline). The tank is equipped with an interior floating roof and seal system that meets the applicable requirements of 40 CFR Part 60, Subpart Kb.
- f. One (1) Tank 535,830 Gallons: (47.75' dia. x 40' high) for the purpose of storing denatured ethanol. The tank is equipped with an interior floating roof and seal system that meets the applicable requirements of 40 CFR Part 60, Subpart Kb.
- g. <u>Piping, Pumps and Valves</u>: pumps, valves and flanges in light liquid service. See emission inventory for equipment counts based on similar sized facility. All piping, pumps and valves are constructed, operated and maintained in accordance with the applicable requirements of 40 CFR Part 60, Subpart VV.
- h. One (1) Truck Loading Terminal for the purpose of transferring denatured ethanol to

trucks for shipment offsite. Truck loading will be equipped with a loadout vapor combustion unit in order to reduce VOC emissions during truck loadout.

- i. One (1) cooling tower with a design water circulation rate of 866,640 gallons per hour. The cooling tower will be constructed with approximately 2 cells.
- j. Plant roads. All roads on plant property will be paved.
- k. Grain unloading system and one (1) grain storage silo (200,000 bushels capacity) ventilated to a 9,000 acfm baghouse.
- I. <u>Grain Scalping/Day Tank system ventilated to an estimated 5,000 acfm baghouse.</u> Grain Scalping/Day Tank Baghouse was not previously included in permit.
- m. One (1) Hammermill and conveyor ventilated to a 3,300 acfm baghouse.
- n. One (1) Ethanol Absorber (aka CO₂ Scrubber): for the purpose of removing VOCs from the carbon dioxide by-product stream. The two-stage scrubber is designed to eliminate HAPs and VOCs from the CO₂ stream.
- o. Wet Cake Storage and Loadout Equipment: all wet cake will be utilized at the adjacent feedlot. The wet cake is conveyed from the centrifuge to the concrete storage pad, from which most will be transferred by front-end loader to the adjacent feedlot.
- p. Two (2) Aqueous Ammonia Storage Tanks.

3. One (1) Anaerobic Digestion System

- a. <u>Two (2) Anaerobic Digesters:</u> used to produce biogas for the ethanol plant boilers.
- b. <u>One (1) Digester Flare:</u> used to burn off excess biogas from the anaerobic digester units during periods when the boilers are not burning all of the biogas generated.

AIR POLLUTION CONTROL EQUIPMENT

All air pollution control equipment is properly installed, operated and maintained at all times whenever the emissions source that it is designated to control is operating.

- 1. One (1) Fabric Filter Baghouse (EP-1) for the purpose of controlling particulate emissions from grain unloading, grain processing and grain storage. The unit is designed for a 9,000 cubic foot per minute flow rate while operating at and ambient temperature.
- 2. One (1) Fabric Filter Baghouse (EP-2) for the purpose of controlling particulate matter from grain scalping and the day tank. The unit is designed for an estimated 5,000 cubic foot per minute flow rate while operating at an ambient temperature. Exact specifications of this baghouse count not be located, therefore this is permitted with estimated specifications. The specifications can be verified via stack testing upon start-up of unit.
- 3. One (1) Fabric Filter Baghouse (EP-3) for the purpose of controlling particulate matter from grain

operation of one hammermill. The unit is designed for a 3,300 cubic foot per minute flow rate while operating at an ambient temperature.

- 4. One (1) flare (EP-9) for the purpose of controlling biogas emissions from the anaerobic digestion system when the boilers are not burning all the biogas generated.
- 5. One (1) flare (EP-12) meeting the design requirements of 40 CFR 60.18 will be used for the purpose of controlling VOC emissions from truck loadout.
- 6. One (1) Ethanol Absorber (aka CO2 Scrubber) (EP-6) for the purpose of removing VOCs from the carbon dioxide by-product stream. The two stage scrubber is designed to eliminate HAPs and VOCs from the CO2 stream.

AIR EMISSIONS ESTIMATES

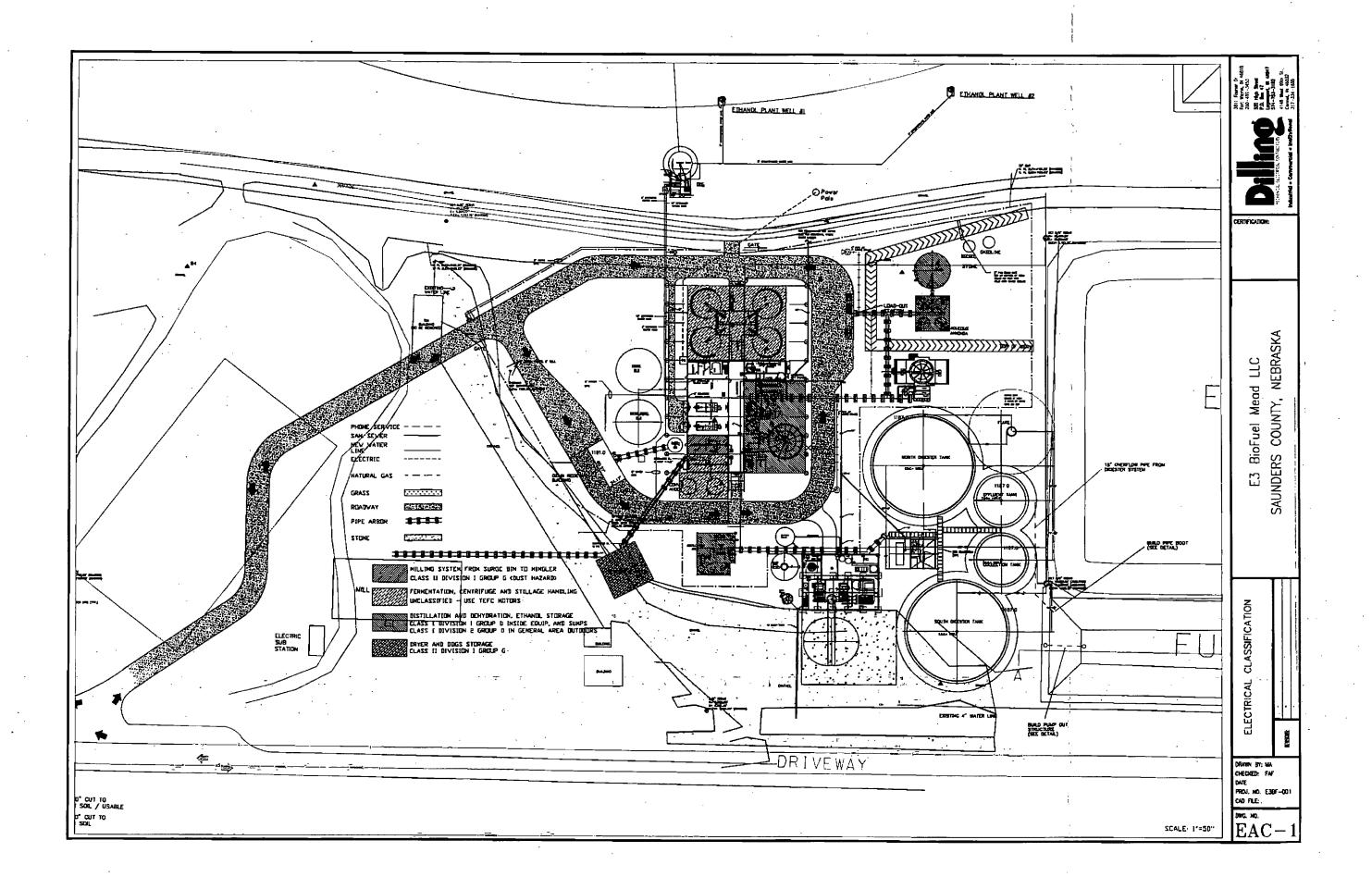
The following are "Requested Limits" for the Permit to Operate for the 24.1 MMgpy plant. Estimated operating emissions are based on 24 hours/day 365 days/year. It is important to note that the plant plans to shut a minimum of twice per year, therefore "Estimated Operating" is a conservative estimate that will not be reached under normal operating conditions.

	Emissions (tons per year for 24.1 MMgpy)										
POLLUTANT	Potential-to-Emit ¹	Estimated									
	Pre-Permit	Requested Limits	Operating ²								
PM	0	< 100	29.24								
PM ₁₀	0	< 100	19.48								
PM _{2.5}	0	< 100	18.49								
NO _x	0	< 100	53.62								
со	0	< 100	28.15								
SO _x	o ;	< 100	98.31								
voc	0	< 100	76.77								
HAPs	o ;	< 25	17.44								

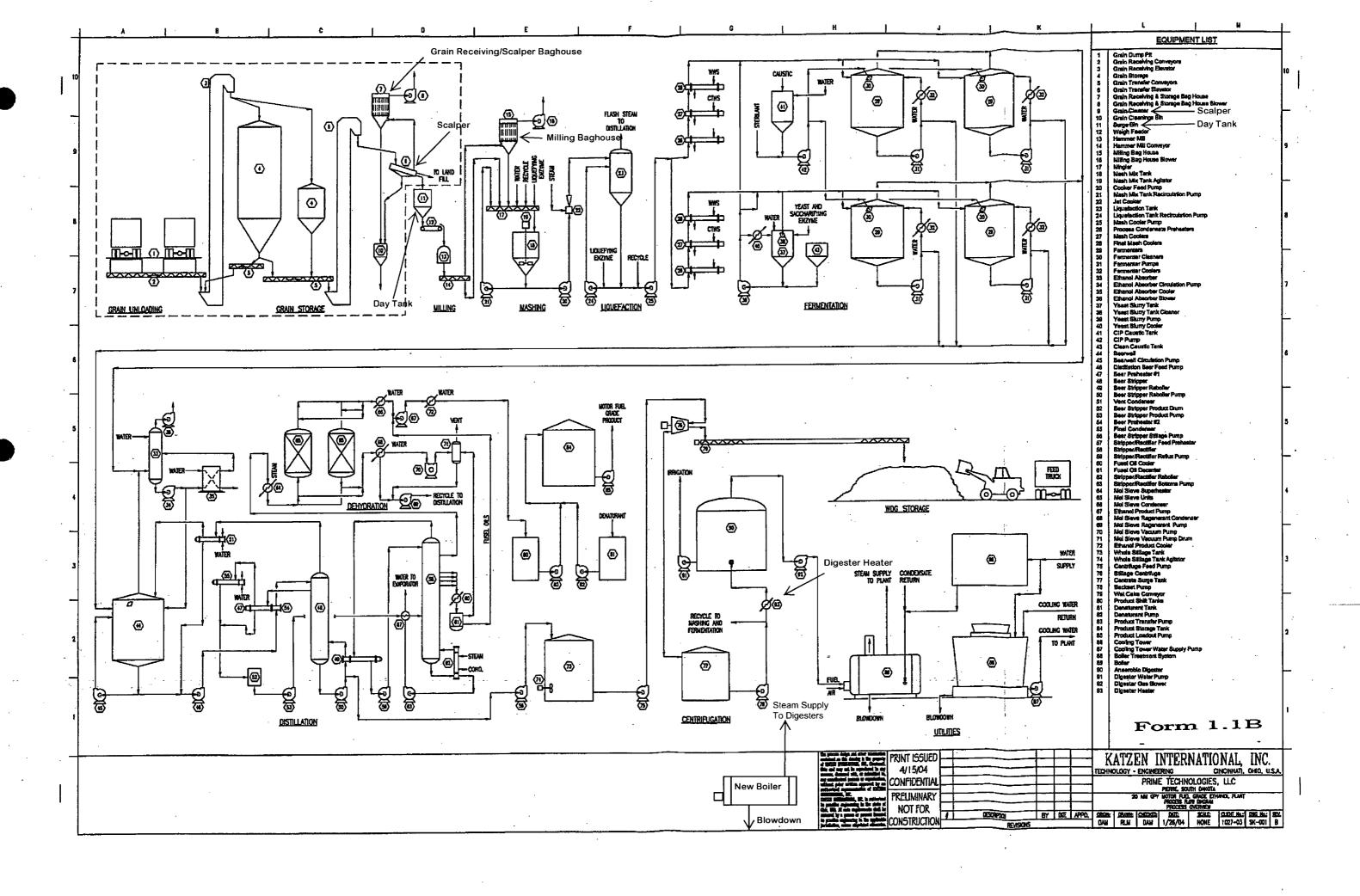
Potential-to-emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, is treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

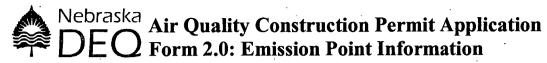
Estimated operating emissions are those emissions from a stationary source based on proposed conditions and hours of operation.

SITE LAYOUT



PROCESS FLOW DIAGRAM





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Section 2.1: Emission Point Summary

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING

Do NOT use pencil to fill out this application. Please type responses or print using black ink.

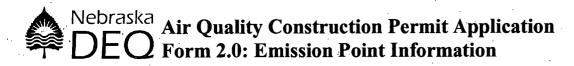
Complete the following table so that all emission points, control equipment, and emission units are accounted for. Use multiple Section 2.1 forms, if needed, so that all emission points, control equipment, and emission units are included. If you have any questions, contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474 or the Air Quality Permitting Section at (402) 471-2189. Source Classification Codes (SCC) are available on the NDEQ website.

Please check if a separate summary document is used as a replacement for this Section. If a replacement document is used, it must contain all of the information asked for in this form. Identify separate summary document with the title of this Section and attach to this form.

Emission Point ID#	Control Equipment ID#	Emission Unit ID#	Source Classification Code (SCC)	Previous Emission Point ID# (For existing emission points only)	Emission Source/Process Description
EP-1	EP-1	EP-1	30200741	EP-1	Grain Unloading Baghouse
EP-2	EP-2	EP-2	30200743	EP-2	Scalper/Day Tank Baghouse
EP-3	EP-3	EP-3	30200743	EP-3	Hammermill Baghouse
EP-4	-	EP-4	10300602	EP-4	Package Boilers
EP-5	-	EP-5	30205091	EP-5	Fugitive Components
EP-6	EP-6	EP-6	-30200998	EP-6	Ethanol Absorber
EP-7		EP-7	Multiple	EP-7	Liquid Storage Tanks
EP-8	-	EP-8	30205052	EP-8	Truck Loadout Fugitives
EP-9	EP-9	EP-9	30199999	EP-9	Digester Flare
EP-10		EP-10	30200755	EP-10	Wet DGS Storage
EP-11	-	EP-11	30200755	EP-11	Wet DGS Handling

Nebraska Air Quality Construction Permit Application Form 2.0: Emission Point Information

Emission Point ID#	Control Equipment ID#	Emission Unit ID#	Source Classification Code (SCC)	Previous Emission Point ID# (For existing emission points only)	Emission Source/Process Description
EP-12	EP-12	EP-12	30190023	EP-12	Loadout Vapor Combustion Unit
EP-13	-	EP-13	38500101	EP-13	Cooling Tower
EP-14	-	EP-14	30500290	EP-14	Paved Roads
EP-15	-	EP-15	10300602	EP-15	Auxiliary Boiler
EP-16	-	EP-16	30200532	-	Grain Fugitives



FACILITY NAME	: AltEn, LLC		DAT	E: January 2013
NDEQ Facility ID#				
			-	

Section 2.2: Air Dispersion Modeling Point Source Information

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING

Do NOT use pencil to fill out this application. Please type responses or print using black ink.

Point Source Information

Emission Point ID#	Emission Point Description	UTM X (m)	UTM Y (m)	Elevation (m)	Stack Height (m)	Temperature of Exhaust (K)	Exit Velocity of Exhaust (m/s)	Inside Diameter of Stack (m)	Flow Rate of Exhaust (m ³ /s)
	<u> </u>	Re	fer to previousl	y submitted m	odeling report.				
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FACILITY NAME	: AltEn, LLC		DAT	E: January 2013
NDEQ Facility ID#	: 84069			

Section 2.3: Air Dispersion Modeling Area and Volume Source Information

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING

Do NOT use pencil to fill out this application. Please type responses or print using black ink.

Area Source Information

Emission Point ID#	Emission Point Description	UTM X (m)	UTM Y (m)	Elevation (m)	X-Length (m)	Y-Length (m)	Release Height (m)	Angle (degrees)	Initial Vert. Dimension (m)
		Ref	fer to previousl	y submitted m	odeling report.				
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Volume Source Information

Emission Point ID#	Emission Point Description	UTM X (m)	UTM Y (m)	Elevation (m)	Initial Lateral Dimension (m)	Initial Vertical Dimension (m)	Release Height (m)
		Refer to previou	isly submitted mod	deling report.			
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Revised 12/10 Page 4 of 4 CP Form 2.0, Section 2.1

08-102



FACILITY NAME: AltEn, LLC		DATE	: January 2013
NDEQ Facility ID#: 84069			

Section 3.1: Criteria Pollutant Emissions Summary (lb/hour)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all emission points are accounted for. Use multiple Section 3.1 forms, if needed, so all emission points are included. List each emission point that will emit any of the pollutants listed in the Emission Point ID# column. For each emission point, indicate the quantity, in pounds per hour, of criteria pollutants that will be emitted in the respective column. Totals should be the sum of the entire column. If you have any questions, feel free to contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474 or the Air Quality Permitting Section at (402) 471-2189.

Please check if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.2 & 3.3.

Emission Point ID#	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	NO _x (lb/hr)	SO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
	Refe	r to Attached	Potential to 1	Emit Emissio	ns Summary	<u> </u>	
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						1	7
TOTAL	6.79	4.56	4.34	13.46	22.45	7.72	17.59

Section 3.1: Criteria Pollutant Emission Summary (lb/hr) Attachment

AltEn, LLC -Mead, Nebraska

Facility ID: 84069

Unit ID	Emission Source(s)	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	SO2 (lb/hr)	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)	HAP (lb/hr)
EP-1	Grain Unloading Baghouse	0.62	0.62	0.62					
EP-2	Scalper/Day tank Baghouse	0.34	0.34	0.34					
EP-3	Hammermill Baghouse	0.28	0.28	0.28					
EP-4/EP-9	Package Boilers/Digester Flare	0.91	0.91	0.91	22.44	11.69	5.81	0.65	0.44
EP-5	Fugitive Components				_			3.27	0.57
EP-6	Ethanol Absorber	2.00	1.00	1.00				12.00	2.95
EP-7.	Liquid Storage Tanks							0.87	0.003
EP-8	Truck Loadout							0.28	0.004
EP-10	Wet DGS Storage	0.001	0.0002	0.0002				0.19	0.01
EP-11	Wet DGS Handling							0.19	
EP-12	Loadout Vapor Combustion Unit	0.040	0.040	0.04	0.003	0.09	0.23	0.03	
EP-13	Cooling Tower	0.87	0.87	0.87					
EP-14	Paved Roads	1.44	0.29	0.07					
EP-15	Auxiliary Boiler ¹	0.15	0.15	0.15	0.01	2.00	1.68	0.11	0.04
EP-16	Fugitives (grain)	0.15	0.07	0.06					_
	Totals, Plantwide (lb/hr)	6.79	4.56	4.34	22.45	13.79	7.72	17.59	4.01

NOTES:

¹ The Auxiliary Boiler lb/hr emissions are based on 2,000 hours/year. All other equipment is based on 8,760 hours/year



FACILITY NAME:	AltEn, LLC	DATE	: <u>January 2013</u>
NDEQ Facility ID#:	84069		

Section 3.2: Criteria Pollutant Emissions Summary (ton/year)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all emission points are accounted for. Use multiple Section 3.2 forms, if needed, so all emission points are included. List each emission point that will emit any of the pollutants listed in the Emission Point ID# column. For each emission point, indicate the quantity, in tons per year, of criteria pollutants that will be emitted in the respective column. Totals should be the sum of the entire column. If you have any questions, feel free to contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474, or the Air Quality Permitting Section at (402) 471-2189.

Please check \boxtimes if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.1 & 3.3.

Emission Point ID#	PM (ton/yr)	PM ₁₀ (ton/yr)	PM _{2.5} (ton/yr)	NO _x (ton/yr)	SO _x (ton/yr)	CO (ton/yr)	VOC (ton/yr)
	Refer	to attached t	o Potential to	Emit Emissi	on Summary		
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TOTAL	29.24	19.48	18.49	53.62	98.31	28.15	76.66

Rev 12/10

Section 3.2: Criteria Pollutant Emission Summary (ton/yr) Attachment

AltEn, LLC -Mead, Nebraska Facility ID: 84069

Unit ID	Emission Source(s)	PM	PM10	PM2.5	SO2	NOx	со	voc	HAP
Oilleib	Emission source(s)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
EP-1	Grain Unloading Baghouse	2.70	2.70	2.70	,				***
EP-2	Scalper/Day tank Baghouse	1.50	1.50	1.50					
EP-3	Hammermill Baghouse	1.24	1.24	1.24					
EP-4/EP-9	Package Boilers/Digester Flare	3.97	3.97	3.97	98.29	51.22	25.47	2.86	1.91
EP-5	Fugitive Components							14.33	2.50
EP-6	Ethanol Absorber	8.76	4.38	4.38				52.56	12.92
EP-7	Liquid Storage Tanks							3.83	0.02
EP-8	Truck Loadout						1	1.21	0.02
EP-10	Wet DGS Storage	0.005	0.001	0.001				0.82	0.04
EP-11	Wet DGS Handling							0.83	
EP-12	Loadout Vapor Combustion Unit	0.160	0.160	0.16	0.013	0.40	1.01	0.12	
EP-13	Cooling Tower	3.80	3.80	3.80					
EP-14	Paved Roads	6.31	1.26	. 0.31			<u> </u>		-
EP-15	Auxiliary Boiler	0.15	0.15	0.15	0.01	2.00	1.68	0.11	0.04
EP-16	Fugitives (grain)	0.64	0.32	0.28					
1	Totals, Plantwide (tons/yr)	29.24	19.48	18.49	98.31	53.62	28.15	76.66	17.44



FACILITY NAME: AltEn, LI	.C	DATE:	January 2013
NDEQ Facility ID#: 84069			

Section 3.3: Hazardous Air Pollutant Emissions Summary

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all emission points are accounted for. Use multiple Section 3.3 forms, if needed, so all emission points are included. Include the Hazardous Air Pollutants (HAP) that will be emitted in the largest quantities source-wide in the top row. List each emission point that will emit any HAP in the Emission Point ID# column. For each emission point, indicate the quantity, in tons per year, of HAP that will be emitted in the respective column. Total HAPs should be the sum of the entire column or row. If you have any questions, feel free to contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474, or the Air Quality Permitting Section at (402) 471-2189.

Please check if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.1 & 3.2.

Hazardous Air Pollutants Emission Point ID#	(ton/yr)	(ton/yt)	(wn/yr)	(ton/yr)	(ton/yr)	(ton/yt)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yt)	(wn/yr)	TOTAL HAP (ton/yr)
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TOTAL HAPs	ξ να <u>αφικό</u> πο με				14. T. T. T. S. J	January Sand			-					17.44

Section 3.3: Hazardous Air Pollutant Emissions Summary (ton/yr) Attachment AltEn, LLC -Mead, Nebraska

Facility ID: 84069

	WDGS							•
	Storage &	Ethanol	Package	Aux.	Fugitive	Product	Truck	
. Compound	Handling	Absorber	Boilers	Boiler	losses	Storage	loading	TOTAL
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Acrolein	0.0017	1.752			0.064	0.0004	0.0002	1.82
Formaldehyde	0.0222	1.7520	0.0334	0.0015	0.0024	0.0004	0.0002	1.81
Acetaldehyde	0.0111	7.6650			2.2212	0.0007	0.0003	9.90
Methanol	0.0044	1.7520			0.2150	0.0007	0.0003	1.97
Hexane		,	0.8007	0.0353		0.0111	0.0047	0.85
Toluene			0.0015	0.0001		0.0011	0.0014	0.00
Benzene			0.0009	0.0000		0.0006	0.0024	0.00
Nickel			0.0009	0.0000				0.0010
Chromium			0.0006	0.0000				0.0007
Dichlorobenzene			0.0005	0.0000				0.0006
Cadmium			0.0005	0.0000				0.0005
Naphthalene			0.0003	0.0000			0.0000	0.0003
Manganese			0.0002	0.0000				0.0002
Mercury			0.0001	0.0000				0.0001
Arsenic			0.0001	0.0000				0.0001
Cobalt			0.0000	0.0000				0.0000
2-Methylnaphthalene			0.000011	0.0000				0.000011
Phenanthrene			0.000008	0.0000				0.000008
Pyrene			0.000002	0.0000				0.000002
Fluoranthene	_		0.000001	0.0000				0.000001
Fluorene			0.000001	0.0000				0.000001
Xylenes						0.0001	0.0031	0.0032
Cumene						0.0000		0.0000
Ethylbenzene						0.00001		0.0000
Carbon disulfide						0.00000		0.00000
Trimethylbenzene							0.0033	0.00330
Cyclohexane							0.00002	0.00002
Hydrogen Sulfide			1.0696			•		1.06960
Totals	0.0395	12.921	1.909	0.037	2.503	0.015	0.0158	

Total Potential to Emit

17.44



FACILITY NAME:	AltEn, LLC	DATE: January 2013
NDEQ Facility ID#:		
	84009	

Section 3.4: Greenhouse Gas Emissions Summary (lb/hr)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all emission points are accounted for. Use multiple Section 3.4 forms, if needed, so all emission points are included. List each emission point that will emit any of the pollutants listed in the Emission Point ID# column. For each emission point, indicate the quantity, in pounds per hour, of criteria greenhouse gas pollutants that will be emitted. Totals should be the sum of the entire column. If you have any questions, contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474 or the Air Quality Permitting Section at (402) 471-2189.

Please check if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.1, 3.2, and 3.3, 3.5. and 3.6

Emission Point ID#	CO ₂ (lb/hr)	CH ₄ (lb/hr)	N ₂ 0 (lb/hr)	HFC (lb/hr)	PFC (lb/hr)	SF ₆ (lb/hr)
EP – 4/EP-9	13,913.58	0.53	0.09	. · ·	· -) , - ;
EP – 12	551.01	0.03	0.01	· -	- ·	. <u>-</u>
EP – 15	2,337.78	0.04	0.004	· <u>-</u>	-	
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TOTAL	16,802.37	0.60	0.104		-, 2121.7	o jone



Section 3.5: Greenhouse Gas Emissions Summary (ton/yr)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all emission points are accounted for. Use multiple Section 3.1 4 forms, if needed, so all emission points are included. List each emission point that will emit any of the pollutants listed in the Emission Point ID# column. For each emission point, indicate the quantity, in tons per year, of criteria greenhouse gas pollutants that will be emitted. Totals should be the sum of the entire column. If you have any questions, please contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474 or the Air Quality Permitting Section at (402) 471-2189.

Please check if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.1, 3.2, 3.3, 3.4, and 3.6.

Emission Point ID#	CO ₂ (ton/yr)	CH ₄ (ton/yr)	N ₂ 0 (ton/yr)	HFC (ton/yr)	PFC (ton/yr)	SF ₆ (ton/yr)
EP – 4/EP - 9	60,941.47	2.31	0.40	-	-	•
EP – 12	2,413.44	0.15	0.03	-	-	-
EP – 15	2,337.78	0.04	0.004	-	-	-
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			•			
TOTAL	65,692.69	2.50	0.44	•	-	



FACILITY NAME:	AltEn, LLC	DATE	: January 2013
NDEQ Facility ID#:			

Section 3.6: Carbon Dioxide Equivalent Summary (ton/year)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or print using blue or black ink.

Complete the following table so that all carbon dioxide equivalent (CO₂e) emissions are accounted for. For each greenhouse gas pollutant, enter the quantity, in tons per year that will be emitted in the respective column. These emission totals can be obtained from Section 3.5. For each greenhouse gas pollutant multiply the emission rate by the CO₂e emission factor to get the CO₂e emission rate. Once CO₂e emission rates have been determined for all greenhouse gas pollutants, sum all CO₂e emission rates and enter the quantity in the bottom box of the table. If you have any questions, please contact the Nebraska Department of Environmental Quality via the Air Quality Permitting Hotline at (877) 834-0474, or the Air Quality Permitting Section at (402) 471-2189.

Please check if a separate summary document is used as a replacement for this Form. Identify separate summary document with the title of this Form and attach. This can be a combined summary with Sections 3.1, 3.2, 3.3, 3.4, and 3.5.

Greenhouse Gas	Emission Rate (From Form 3.4)	CO ₂ e Emission Factor	CO ₂ e Emission Rate
Pollutant	(tons/year)	(tons CO ₂ e/ton pollutant)	(tons/year)
CO ₂	65,692.69	1	65,692.69
CH ₄	2.50	21	52.46
N ₂ O	0.44	310	134.89
HFC		11,700	
PFC		17,300	
SF ₆		23,900	
	A CONTRACT OF STREET	Total CO ₂ e emissions	65,877.17



FACILITY NAME:	AltEn, LLC	DATE: January 2013
NDEQ Facility ID#:	84069	

Section 4.1: NSPS Applicable Requirements

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or use black ink.

For each applicable New Source Performance Standard (NSPS) that a unit(s) located at your facility is/will be subject to, identify the applicable requirement (ex. NSPS, Subpart Dc), the requirement citation (e.g. T129, Chapter 18, Section 001.52 and/or 40 CFR 60.40c), and the unit(s) subject to the applicable requirement (e.g. EU31-Boiler #3). Only units being addressed in this application need to be included on this page. For information on NSPS, visit http://www.epa.gov/region07/programs/artd/air/nsps/nsps_standard_contacts.htm or contact NDEQ NSPS Coordinator at (402) 471-2189.

Applicable Requirement	Requirement Citation	Units Subject to Applicable Requirement (Emission Unit ID# and Description)
NSPS, Subpart A – General Provisions	Chapter 18, Section 001.01, 40 CFR 60.1	EP-4: Boilers EP-15: Auxiliary Boiler EP-7: Liquid Storage Tanks
NSPS, Subpart Dc	Chapter 18, Section 001.62 40 CFR 60.40c	EP-4: Boilers EP-15: Auxiliary Boiler
NSPS, Subpart Kb	Chapter 18, Section 001.62 40 CFR 60.11b	EP-7: Liquid Storage Tanks
NSPS, Subpart VV	Chapter 18, 40 CFR 60	EP-5: Fugitive Components
		·
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Section 4.1: NSPS Applicable Requirements (continued)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or use black ink.

For each New Source Performance Standard (NSPS) that may appear to apply to a unit(s) located at your facility but actually does not apply, identify the applicable requirement (e.g. NSPS, Subpart IIII), the requirement citation (ex. T129, Chapter 18, Section <u>001.76</u> and/or 40 CFR 60.4200), and the unit(s) that appear to apply to the subpart (ex. EU20-Emergency Generator) and the reason why the subpart does not apply (e.g. displacement is greater than 30 liters per cylinder). Only units being addressed in this application need to be included on this page.

Applicable Requirement	Requirement Citation	Unit ID# and Description	Reason(s) Why Requirement Does Not Apply
·			
	· .		



FACILITY NAME: AltE	in, LLC	DATE: January 2013
NDEQ Facility ID#: 8406	9	

Section 4.2: NESHAP Applicable Requirements

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or use black ink.

For each applicable National Emission Standard for Hazardous Air Pollutants (NESHAP) that a unit(s) or process located at your facility is/will be subject to, identify the applicable requirement (e.g. NESHAP, Subpart ZZZZ), the requirement citation (e.g. T129, Chapter 28, Section <u>001.88</u> and/or 40 CFR 63.6580), and the unit(s), process, or emission point(s) that is subject to the applicable requirement (e.g. EU20, Emergency Generator or EP-32, Fermentation Scrubber Vent). If no units or processes at your facility are subject to any NESHAP requirements (including any area source NESHAPs), this section does not need to be completed and/or submitted. For information about NESHAPs, view http://www.epa.gov/ttn/atw/mactfnlalph.html or contact NDEQ MACT Coordinator at 402-471-2189 for assistance.

NOTE: Completing this section does <u>not</u> fulfill the initial notification requirements under the NESHAP general provisions, please contact the NDEQ MACT Coordinator for initial notification requirements and forms.

Applicable Requirement	Requirement Citation	Units Subject to Applicable Requirement (Emission Unit ID# and Description)
N/A	,	
	·	
:		
		·



FACILITY NAME:	AltEn, LLC DATE: January 2013	
NDEQ Facility ID#:	84069	

Section 4.2: NESHAP Applicable Requirements (continued)

IMPORTANT: Do NOT use pencil to fill out this application. Please type responses or use black ink.

For each National Emission Standard for Hazardous Air Pollutants (NESHAP) that may appear to apply to a unit(s) or process located at your facility but actually does not apply, identify the applicable requirement (e.g. NESHAP, Subpart ZZZZ), the requirement citation (e.g. T129, Chapter 28, Section <u>001.88</u> and/or 40 CFR 63.), and the unit(s), process, or emission point(s) that is subject to the applicable requirement (e.g. EU20, Emergency Generator or EP-32, Fermentation Scrubber Vent), and the reason why the subpart does not apply.

Applicable Requirement	Requirement Citation	Unit ID# and Description	Reason(s) Why Requirement Does Not Apply
N/A			
			""
	,		



Air Quality Permitting Application Form 5.0: Facility Information

FACILITY NAME: AltEn, LLC DATE: January 201;	3
NDEQ Facility ID#: 84069	

Section 5.3: Ethan	<u>ol Pro</u>	duction Fac	ility	<u>Infor</u>	<u>mation</u>			٠
IMPORTANT: READ THE INS Do NOT use pencil to fill out this						MPLETING.		
		General l	Infor	mation				
1) Indicat	e the quar	ntity of the following	ing pro	oducts tha	t have been and	d/or will be pro	duced:	
Prod	uct			Current A	Mount	Maximum Pro	posed Amo	ount
Denatured Ethanol		,	24,	100,000	gallons/year	24,100,000	gallon	s/year
Anhydrous Ethanol		-		-	gallons/year		gallon	s/year
Wet Distilled Grain Solubles (V	WDGS) -	% H ₂ O	20	00,325	tons/year	200,325	tons/ye	ear
Modified WDGS (MWDGS) -	% H ₂ O			-	tons/year	-	tons/ye	ear
Dry Distilled Grain Solubles (I	DDGS) -	% H ₂ O		-	tons/year	-	tons/ye	ear
Other:								
Other:								
2) Milling Type:		2869)		mentation	Type: Co	tch Fermentation tinuous Fermer her:	ntation	
4) Type(s) of material used for e							n availabil	<u>ity</u>
5) Maximum grain/material thro	oughput rec	quired for maximum	n ethan	ol producti	ion: <u>237,965</u> ton	s/year		
		Grain Receiv						
	number o	of the following un						
Unit Type		Curren	nt Num	ber	1	Proposed Total 1	Number	
Truck Dump Pit						Same		
Rail Dump Pit			-			<u> </u>		
	7) F	For each Dump Pit					<u> </u>	
Unit Name					t appropriate des			
Grain Unloading Bagho	use			·	d Choke-flow		house	
		Enclosed 1	Partiall	y Enclosed	d Choke-flow	v Other	<u> </u>	
		Enclosed 1						•
If there are/will be more th							described.	
8) Indicate th	e % of gr	ain that currently	is and/	or will be	received via t	he following:		
Received By:		Percentage		Re	eceived By:	Per	rcentage	
Straight Truck	c:	%/a: %	•	Rail		c:	% / a:	%
Hopper Bottom Truck	c: 1	00 % / a: 100 %		Other:		c:	% / a:	%



Air Quality Permitting Application Form 5.0: Facility Information

FACILITY		, LLC			DATE: <u>J</u> a	nuary 2013	
NDEQ Faci	llity ID#: <u>84069</u>		<u></u>				
Section	5.3: Ethano	Production	1 Facility In	orm	ation (cont		
			nent Storage Info				
· · ·	Complete the	•	ation for each perm	•		e source:	
EU ID#	Descri	ntion	Capacity (bu)		Height (m)	Diameter (m)	New
201211	Storage		200,000 bu		8 ()		Unit
<u>-</u>	Storage	: 5110	200,000 bu				
		**	<u> </u>			1	
							
If there are	l e more than four perm	nnent storage units (i.e	e. silos and bins), attach	addition	nal information so th	at each unit is described	
			for grain storage, com				
	10) Gra	in Scalping and	Hammermilling	g Opei	rations 🔲 N	N/A	
	Complete the	following informa	tion for each scalp	er and l	hammermill at th	e source:	
EU ID#	EU Name	Unit	Туре		Bin Associated with Unit?	Size of Surge Bin (bu)	New Unit
EP – 2	Hammermill Baghouse	☐ Scalper 区	Hammermill		Yes No		
EP - 3	Scalper/Day Tank Baghouse	⊠ Scalper [Hammermill		Yes No		
, s. 1		☐ Scalper ☐	Hammermill		Yes No		
If there are	more than three scalpe	rs, hammermills, or as	ssociated surge bins, att	ach addi	itional information so	o that each unit is descri	bed.
	Gr	ain and By-Pro	duct Drying Op	eratio	ns 🛛 N/A		
11) Indicate	the number of grai	n dryers that curre	ently exist and will	exist a	t the source: c:	/ a: □	N/A .
12) Indicate	the number of DD	GS dryers that cur	rently exist and wi	ll exist	at the source: c:	/a: [□ N/A
	•	13) For each	n Dryer complete th	ne follo	owing:	<u> </u>	
EU ID#	EU Name	Drying Capacity (tons/hour)	Select	the mo	st appropriate desc	ription(s):	New Unit
			Column Dr		Self Cleaning So	reens (<50 mesh)	
			Column Dr		Self Cleaning Sc Other	ereens (<50 mesh)	
	If there are n		attach additional inform Section 6.1 for each dry			cribed.	
	14		erformance Stan		ę	5	
Ethanol Man	ndling operation loca ufacturing facility is Contact the Departm	ated at this subject to:	☐ NSPS, Subpart DE	-	Other		f 1



Air Quality Permitting Application Form 5.0: Facility Information

FACILITY NAME: Alten, LLC DATE: January 2013 NDEQ Facility ID#: 84069		
NDEQ Facility ID#: 84069	FACILITY NAME: Alten, LLC	DATE: January 2013
	NDEQ Facility ID#: 84069	

Section 5.3: Etl	nanol Producti	on Facil	ity Info	rmation (co	nt.)						
	Fe	rmentation	Operation	ns							
15) Indicate the number	of fermenters that cur	rently exist a	and will exist	t at the source: c:	4 / a: 4	□ N/A					
16) Indicate the number	of beer wells that curr	ently exist a	nd will exist	at the source: c:	1 / a: 1	□ N/A					
	17) Solid By	-Product S	Shipping Ir	nformation							
Indica	te the % of WDGS tha	t currently i	s and will be	shipped via the	followir	ıg:					
Shipped By:	Percenta	ge	Ship	oped By:	7	Percentage	•				
Straight Truck	c: %/a:	%	Rail		c:	% / a:	%				
Hopper Bottom Truck	c: %/a:	%	Other: Fron	t End Loader	c:	100 % / a: 100	%				
Indicate the	% of that curre	ntly is and is	s anticipated	to be shipped via	a the fol	llowing:					
Shipped By:	Percenta	ge	Ship	oped By:		Percentage					
Straight Truck	c: %/a:	%	Rail		c:	% / a:	%				
Hopper Bottom Truck	c: %/a:	%	Other:	_	c:	% / a:	%				
If more than two	solid by-products will be pr	oduced, attach	additional info	rmation so that each l	by-produc	et is described.					
	Liq	uid Loadoı	ut Informa	tion							
18) Indicate	the amounts of the fo	llowing proc	lucts that have	ve been and will b	oe loade	ed out:					
Product	Method	million gal	lons / year	Method		million gallons	/ year				
Anhydrous Ethanol	Truck	c: - /	′ a: -	Rail		c: - /a: -	,				
Denaturant	Truck	c: - /a	: 0.723	Rail		c: - /a: -					
Denatured Ethanol	Truck	c: 24.1	/ a: 24.1	Rail		c: - /a: -	,				
E85	Truck	c: ,	/ a:	Rail		c: - /a: -					
Other:	Truck	c: ,	/ a:	Rail		c: - /a: -					
19) Requested operational limitation(s) for ethanol liquid loadout (please be specific and include units): N/A											
20) The following Denatu	rant will be used: 🛛 Na	tural Gasolii	ne Unlead	ed Gasoline 🗌 Oth	ier						
21) Type of liquid loading	g into Trucks: 🔲 None 🛭	Submerge	d Loading [Bottom-Fill Load	ing 🗋 C	Other					
22) Type of liquid loading	g into Railcars: None	Submerge	ed Loading	Bottom-Fill Loadi	ing 🔲 C	ther <u>N/A</u>					



Air Quality Permitting Application Form 5.0: Facility Information

FACILITY NAME: Alten, LLC NDEQ Facility ID#: 84069		DATE: January 2013
Section 5.3: Ethanol Pro	duction Facility Informa	ation (cont.)
V	apor Recovery System Informa	tion the second
23) Will a vapor recovery system with flar	re be installed on the liquid loadout oper	ations? Xes No
24) The system will recover vapors from:	Truck loadout 🗌 Rail loadout 🔲 I	Both Other
25) Captur	e and Control Efficiencies of Vapor Rec	overy System
	Truck Loadout	Rail Loadout
(A) Capture Efficiency	100%	
(B) VOC Control Efficiency	86%	
(A x B) Overall Control Efficiency		
For each combustion	flare at the facility, also complete Section 7.	l for combustion flares.
26) Potential to En	nit Calculations Attached? 🔯	YES
27) Additional Info	ormation Attached?	YES 🛛 NO

Actual	Operating Rates	
28) Indicate the quantity of the follow	ing products that have been produ	aced or received:
Product	Maximum Annual Amount in the Previous Five Years	Amount Last Year
Denatured Ethanol	gallons/year	gallons/year
Anhydrous Ethanol	gallons/year	gallons/year
Wet Distilled Grain Solubles (WDGS) - % H ₂ O	tons/year	tons/year
Modified WDGS (MWDGS) - % H ₂ O	tons/year	tons/year
Dry Distilled Grain Solubles (DDGS) - % H ₂ O	tons/year	tons/year
Grain	tons/year	tons/year
Denaturant	gallons/year	gallons/year
Other:		
Other:		
Other:		
29) Actual Emission Calculations	Attached? YES	
30) Additional Information Attac	hed? YES NO	0



FACILITY NAME: AI	ltEn, LLC	DATE: January 2013
NDEQ Facility ID#: 84	1069 Emission Point Identifi	cation#: EP - 4

Section 6.1: External Combustion Unit

	AD THE INSTRUCTION of fill out this application.			CTION BEFORE COMP.	LETING.							
•		General In			<u>, , , , , , , , , , , , , , , , , , , </u>							
1) Unit ID#: EP - 4	a, EP-4b		2) Install	ation Date:		☐ New						
3) Unit Type: 🛛 B	oiler Dryer Other	r	4) Maxir	num Rated Capacity: 66		/Btu/hr ombined)						
5) Gross Power Out	tput:	MW N/A	Net Pow	er Output:	MW	□ N/A						
·	6) Stack	Information – E	ach Boi	ler N/A		٠						
Height	Top Inside Diameter	Stack Discha	rge	Exit Velocity of Gas	Exit Temperatu	re of Gas						
79 ft	4.17 ft	☐ Horizontal ☐ Vertical		m/s		K						
.,		☐ Vertical with	n Rain									
		7) Fuel In	formatic	on								
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Conto (include un		Fuel Specifications	Operating Lim (include un							
Natural Gas	66.0 MMBtu/hr	1,020 Btu/	sef	% Sulfur: N/A	578,160	⊠ N/A						
Tractural Gas	(Combined)	1,020 Btu/	301	% Ash:	MMBtu/yr	Z 14/A						
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Conto		Fuel Specifications	Operating Lim (include un							
Biogas	66.0 MMBtu/hr	680 Btu/s	cf	% Sulfur: N/A	578,160	⊠ N/A						
Diogas	(Combined)	OOO Dtu/s	•	% Ash:	MMBtu/yr	Z NA						
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Conto		Fuel Specifications	Operating Lim (include un							
				% Sulfur: % Ash:		□ N/A						
If the external com	ibustion unit combusts n	nore than three types	of fuel, a	ttach additional pages so	that all fuel types	are listed.						
If the external combustion unit combusts more than three types of fuel, attach additional pages so that all fuel types are listed. 8) New Source Performance Standard Applicability												
This external combustion unit is subject to: If unknown contact the department for additional information NSPS, Subpart D NSPS, Subpart Db Other												



	AltEn, LLC		DATE:	January 2013
NDEQ Facility ID#:	84069	Emission Po	int Identification#:	EP - 4
Section 6.1: Ex	xternal Combus	stion Unit (cont	inued)	
	9) Air l	Pollution Control Eq	uipment	,
Is there	an air pollution control d	evice(s) associated with the	nis unit? YES	⊠ NO
Control Equipment ID#	Type of Control Equipment	Pollutant(s) Controlled	% Control Efficience	y Installation Date
Control Equipment ID#	Type of Control Equipment	Pollutant(s) Controlled	% Control Efficience	y Installation Date
•			<u> </u>	
	<u>.</u>	<u> </u>	<u> </u>	<u></u>
f there are two or more	pieces of control equipme	ent identify the correct con	figuration: Series	Parallel Other:
. 1	0) Potential to Emit	Calculations Attache	ed? XES	
,	1) Additional Inform	<u> </u>		NO
Complete the fo	llowing ONLY if comp	eleting this Section as I	Part of an Operatin	g Permit Application
Complete the fo	llowing ONLY if comp	Description of the company of the co	Part of an Operating on busted in the externa	g Permit Application
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com	Part of an Operatin	g Permit Application
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com	Part of an Operating on busted in the externation on the combusted	g Permit Application 1 combustion unit:
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com Maximum Am in the Previous	on busted in the externation Combusted bus Five Years	g Permit Application l combustion unit: Amount Last Year
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com Maximum Am in the Previous	on busted in the externation Combusted bus Five Years	g Permit Application l combustion unit: Amount Last Year
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com Maximum Am in the Previous	on busted in the externation Combusted bus Five Years	g Permit Application l combustion unit: Amount Last Year
Complete the fo	llowing ONLY if comp	Operating Informatic type that has been com Maximum Amin the Previous Number	on busted in the externations Five Years Units	g Permit Application 1 combustion unit: Amount Last Year Number Units
Complete the fo	llowing ONLY if comp he quantity of each fuel Fuel Type	Operating Informatic type that has been com Maximum Amin the Previous Number	on busted in the externations Five Years Units	g Permit Application 1 combustion unit: Amount Last Year Number Units
12) Indicate t 13) If this is an electric Year Gross MW	llowing ONLY if comp he quantity of each fuel Fuel Type	Operating Informatic type that has been com Maximum Amin the Previous Number	on busted in the externations Five Years Units	g Permit Application 1 combustion unit: Amount Last Year Number Units
Complete the fo	llowing ONLY if comp he quantity of each fuel Fuel Type	Operating Informatic type that has been com Maximum Amin the Previous Number	on busted in the externations Five Years Units	g Permit Application 1 combustion unit: Amount Last Year Number Units
12) Indicate t 13) If this is an electric Year Gross MW Produced Net MW Produced	llowing ONLY if comp he quantity of each fuel Fuel Type	Departing Information type that has been come Maximum Amin the Previous Number are gross and net power ger	on busted in the externations Five Years Units	g Permit Application 1 combustion unit: Amount Last Year Number Units



F	1/	(ΞI	L	Γ	Γ	Y	N	A	N	II	C:	1	١	t	E	n	L	L	C																							Ι)/	V	Π	Ċ.	J	a	n	u	11	·v	2	0	1	3					
ì	VI)]	E(Q	F	a	:il	lit	y	I	Di	¥:	•	34	0	6	9											I	Cı	n	is	S	10	n	I	P _O	iı	nt	Ι	d	eı	nt																				
													ı																																			•													Ä	

	External Con				•									
	AD THE INSTRUCTION of fill out this application. F			CTION BEFORE COMP g black ink.	LETING.									
		General In	formatic	on	_									
1) Unit ID#: EP - 15 2) Installation Date: New 3) Unit Tyme: X Roiler Dryer Other 4) Maximum Pated Consoits: 20 MMPty/br														
3) Unit Type: Boiler Dryer Other 4) Maximum Rated Capacity: 20 MMBtu/hr														
5) Gross Power Out	put:	MW N/A	Net Pow	er Output:	MW N/A									
	6)	Stack Informa	tion	□ N/A										
Height	Top Inside Diameter	Stack Discha	arge	Exit Velocity of Gas	Exit Temperature of Gas									
. 5	•	☐ Horizontal												
17.375 ft	2.156 ft	∨ Vertical		m/s	K									
		☐ Vertical with	n Rain		,									
		7) Fuel In	formatio	on										
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Cont (include un		Fuel Specifications	Operating Limitation (include units)									
Natural Gas	20 MMBtu/hr	1,020 Btu	/a.a.f	% Sulfur: N/A	2,000 N/A									
Naturai Gas	20 MMBtu/III	1,020 Btu	sci	% Ash:	hours/year									
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Cont (include un		Fuel Specifications	Operating Limitation (include units)									
				% Sulfur:										
				% Ash:	□ N/A									
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Cont (include un		Fuel Specifications	Operating Limitation (include units)									
				% Sulfur:	□ N/A									
			[% Ash:	□ N/A									
If the external com	bustion unit combusts n	nore than three type:	s of fuel, at	ttach additional pages so	that all fuel types are listed.									
	8) New So	urce Performan	ce Stanc	dard Applicability										
	ustion unit is subject to: the department for addi		Subpart D Subpart Da	☐ NSPS, Subpart D a ☑ NSPS Subpart D										



FACILITY NAME:	AltEn, LLC			DA	TE: <u>Janu</u>	iary 2013	
NDEQ Facility ID#:	84069		Emission Poi	int Identificat	ion# <u>: EP</u>	-15	
Section 6.1: Ex	kternal Comb	ustion (J nit (cont i	inued)	-		
`	9) Ai	r Pollution	n Control Eq	uipment			
. Is there	an air pollution contro	l device(s) a	ssociated with th	is unit?	YES	⊠ NO	
Control Equipment ID#	Type of Control Equipment	Pollutan	t(s) Controlled	% Control Ef	ficiency	Installation	Date
	1 '		·				,
Control Equipment ID#	Type of Control Equipment	Pollutan	t(s) Controlled	% Control Ef	ficiency	Installation	n Date
		,					
					· · · · · · · · · · · · · · · · · · ·		
70.1			.1	<u> </u>	: : 🗆 D		· · · · · · · · · · · · · · · · · · ·
If there are two or more	pieces of control equip	ment identify	y the correct con				r:
1	0) Potential to Em	it Calcula	tions Attache	ed?	YES		
1	1) Additional Info	rmation A	ttached?	☐ YES	⊠ NC)	•
Complete the fol	llowing ONLY if cor	npleting th	is Section as P	art of an Ope	erating Pe	rmit Applica	ition
	•	Operatio	ng Informatio	on			
12) Indicate t	he quantity of each fu	el type that				mbustion unit	:
	Fuel Type		Maximum Amo	ount Combusted us Five Years	1 . A	Amount Last Y	ear
	Tuel Type		Number	Units	Nu	ımber	Units
•							
						r	
	<u> </u>						
13) If this is an electric	generating unit, provide	e the gross ar	nd net power gen	eration from thi	s unit for th	he past five yea	ırs:
13) If this is an electric	generating unit, provide	e the gross ar	nd net power gen	eration <u>from thi</u>	s unit for th	he past five yea	nrs:
Year Gross MW	generating unit, provide	e the gross ar	nd net power gen	eration from th	s unit for the	ne past five yea	ars:
Year Gross MW Produced Net MW	generating unit, provide	e the gross ar	nd net power gen	eration from thi	s unit for the	ne past five yea	ırs:
Year Gross MW Produced Net MW Produced	generating unit, provide			eration from thi	<u>s unit</u> for tl	ne past five yea	irs:



F	A	(I	L	ľ	Γ	Y]	N	A	ľ	V	I	C:	A	1	tl	E	n.		I	J	C]	D	A	J	ſΙ	C:		J٤	u	11	12	ır	v	2	20)1	3					
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Section 6.5:	: C	ontro	olled Er	nission Poi	int (with	<u>iout combu</u>	<u>ıstio</u>	n)	
IMPORTANT: RE. Do NOT use pencil to							OMPI	LETING.	
				General I	nformatio	n			
1) Control Equipme	ent (C	CE) ID#	: EP – 1		2) CE Inst	allation Date:		☐ New	/ Unit
3) CE Name/Descri	iptior	n: Grai i	n Unloading	Baghouse					
	Depe	nding o	n the type of	f control device, y	ou may need	to complete a sect	ion in	Form 7.0	
•				4) Unit I	<u>nformatio</u>	n			
	List	all the	emission uni	ts that are controll	ed by the cor	ntrol equipment ide	entifie	d above:	
Unit ID#		Į	Jnit Type ¹	`Unit 1	Name	Maximum Capa (include units		Installation Date	New Unit
-		1	Dump Pit	Grain R Stat		2,725 bu/hr			
-		St	orage Bins	Grain S	torage	200,000 bu			
		Gra	in Receiving	g Elevate	or Leg				
			<u></u>						
•						•			
][
If more than eight unit	ts' emi	issions ar	e controlled by	this niece of control ed	uinment attach	an additional page so t	hat all e	mission units are accounte	d for
¹ Uni	t Type	s could it	nclude: Dryer, I	Distillation Vent, Ferm	enter, Paint Boo	th, Dump Pit, Conveyo	r, Load	out Spout, etc.	A 101.
			5)	Stack Inform	ation	□ N/A			
Height	То	p Inside	Diameter	Stack Disc		Exit Velocity of	Gas	Exit Temperature	of Gas
				☐ Horizontal					
18.96 ft		2.5	ft	⊠ Vertical		9.314	m/s		K
				☐ Vertical w	ith Rain			<u>)</u>	
				6) Control	Informat	ion			
Pollutant(s) Con	trolle	ed b	% Conti	rol Efficiency	Pollutan	t(s) Controlled		% Control Efficience	у
PM/PM10/PN	M2.5		,	~99%					
					1				
	If th	e air po	llution contr	ol device(s) is a ba	aghouse, com	plete the followin	g: [□ N/A	
A		<u> </u>	(dscf/min)		<u> </u>	Grain Load			
		9,00	0		<u> </u>		0.008	· · · · · · · · · · · · · · · · · · ·	_



F	A	(1	L	Γ	T	Y	']	N	A	1	И	F			7	4	l	ı	C	n.		Ι	(D	A	V	[]	E		J	a	n	u	a	r	V	2	0	1	3						
																																																																										Ī	
N	D	l	₹(3	F	a	C	il	it	y]	L) †	:		8	4	0	6	9													1	Di	n	1	S	S	iO	I	l	P	0	İI	ıt	I	d	e	n	t i	fi	Ci	at	i(01	n;	•	1	E	P		1													

Section 0.5:	Controllea E	Ш	SSION PUID	ii (Wii	nout co	mousuc)11)	
	7	Co	ntrolled Unit	Fuel In	formatio	n '		
Will any of the units	being controlled by th	ie CE	combust fuel (b	oiler, dry	er, etc)? 🛚 🗵	No Yes		
If Yes, Complete the	following information	n for	each emission u	nit being o	controlled th	at combusts f	uel:	
Unit ID#:			Maximum Rat	ed Capaci	ty of Unit:	_		MMBtu/hr
Unit Name/Description	on:					•	• •	
Со	mplete the following	infor	nation for each	type of fu	el combuste	d in the emiss	ion unit:	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include un		Fuel Spec	ifications		ating Limitation nclude units)
		. '	, ,		% Sulfur:		, .	□ N/A
OD A II II ON	T T T T T T T T T T T T T T T T T T T	1.0.1			% Ash:		:	<u> </u>
OP Application ON	LY: Provide the actua	il fue	usage for this f	uel type to	or the past fi	ve years (pas	t year if	new source):
Year ·							٠.	
Throughput (Units:)								
If the emission	on unit combusts more	than	one type of fue	l, attach a	dditional pa	ges so that all	fuel typ	es are listed.
Unit ID#:			Maximum Rat	ed Capac	ty of Unit:		٠,	MMBtu/hr
Unit Name/Description	on:			•				
Co	mplete the following	infor	mation for each	type of fu	el combuste	d in the emiss	sion unit:	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include un		Fuel Spec	eifications		ating Limitation nclude units)
				* 1	% Sulfur:			
			١		% Ash:			- · · · · ·
OP Application ON	LY: Provide the actua	al fue	l usage for this f	uel type f	or the past f	ive years (pas	t year, if	new source):
Year	, ·	٠.		٠ . ن	•		• •	•
Throughput (Units:)			٠.					‡ ‡
If the emission	unit combusts more t	han o	ne type of fuel,	attach add	itional page	s so that all fu	iel types	are addressed.
	If more than two of attach additional							
8) Potential to E	mit Calculations	Atta	ched? 🛛 Y	ES				
9) OP Application	on ONLY: Actua	Em	ission Calcu	lations A	Attached?	YES		
10) Additional I	nformation Attac	ḥed'	? YES		NO		٠	



FACILITY NAME: Al	tEn, LLC DATE: January 2013	
_		
NDEQ Facility ID#: 84	069 Emission Point Identification#: EP - 2	

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING. Do NOT use pencil to fill out this application. Please type responses or print using black ink. Ceneral Information	
1) Control Equipment (CE) ID#: EP - 2 2) CE Installation Date:	
3) CE Name/Description: Scalper/Day Tank Baghouse Depending on the type of control device, you may need to complete a section in Form 7.0 4) Unit Information List all the emission units that are controlled by the control equipment identified above: Unit ID# Unit Type¹ Unit Name Maximum Capacity (include units) Scalper Scalper Tank Day Tank Day Tank Day Tank If more than eight units¹ emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounte "Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. S) Stack Information N/A Height Top Inside Diameter Stack Discharge Exit Velocity of Gas Exit Temperature of Horizontal Wertical Phorizontal Wertical Phorizontal Wertical Wertical Phorizontal Wertical Wertical Phorizontal Wertical	
Depending on the type of control device, you may need to complete a section in Form 7.0 4) Unit Information List all the emission units that are controlled by the control equipment identified above: Unit ID# Unit Type! Unit Name Maximum Capacity (include units) Scalper Scalper Tank Day Tank Day Tank If more than eight units' emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounte 'Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. 5) Stack Information N/A Height Top Inside Diameter Stack Discharge Exit Velocity of Gas Exit Temperature of Horizontal Horizontal Vertical Horizontal Vertical with Rain 6) Control Information	Unit
List all the emission units that are controlled by the control equipment identified above: Unit ID#	-
List all the emission units that are controlled by the control equipment identified above: Unit ID# Unit Type¹ Unit Name Scalper Scalper Tank Day Tank Day Tank If more than eight units¹ emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounte 'Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. S Stack Information Height Top Inside Diameter Stack Discharge Exit Velocity of Gas Exit Temperature of Horizontal Vertical Vertical Vertical with Rain 6) Control Information	
Unit ID# Unit Type! Unit Name Maximum Capacity (include units) Scalper Scalper Tank Day Tank	
Scalper Scalper Tank Day Tank If more than eight units' emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounte 'Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Society Scalper S	
Scalper Tank Day Tank Day Tank If more than eight units' emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounted Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information N/A	New Unit
If more than eight units' emissions are controlled by this piece of control equipment, attach an additional page so that all emission units are accounte 'Unit Types could include: Dryer, Distillation Vent, Fermenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Solvent	
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	<u> </u>
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	井
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	井
Unit Types could include: Dryer, Distillation Vent, Fernmenter, Paint Booth, Dump Pit, Conveyor, Loadout Spout, etc. Stack Information	d for.
Height Top Inside Diameter Stack Discharge Exit Velocity of Gas Exit Temperature of Horizontal 40 ft 0.58 ft Vertical	
40 ft 0.58 ft	
40 ft 0.58 ft Vertical 96.136 m/s Vertical with Rain 6) Control Information	of Gas
Vertical with Rain 6) Control Information	
6) Control Information	K
Pollutant(s) Controlled % Control Efficiency Pollutant(s) Controlled % Control Efficience	
	у
PM/PM10/PM2.5 ~99%	
If the air pollution control device(s) is a baghouse, complete the following: \Boxed N/A	
Air Flow Rate (dscf/min) Grain Loading (grains/dscf)	
~5,000 0.008	



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I	N	D	E	Q	F	20	il	it	y	I	D	#:		8	4()6	9											E	n	11	S	si	0	n	P	0	in	t	I	d	er	ıti	fi	c	at	i(r	1#	:	E	P		2								╝	

Section 6.5:	Controlled E	mi	ssion Poir	ıt (wi	thout co	mbustic	on)	· . · ·
	7) Co	ntrolled Unit	Fuel I	nformatio	n '		
Will any of the units	being controlled by the	he CE	combust fuel (l	oiler, dr	yer, etc)? -	No 🗌 Yes	. •	
If Yes, Complete the	following informatio	n for	each emission u	nit being	controlled th	nat combusts f	uel:	
Unit ID#:			Maximum Rat	ed Capa	city of Unit:			MMBtu/hr
Unit Name/Descripti	on:		<u> </u>			ř.		
· Co	mplete the following	infor	mation for each	type of f	uel combuste	d in the emiss	sion unit	•
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include ur			cifications		rating Limitation include units)
					% Sulfur: % Ash:			□ N/A
OP Application ON	LY: Provide the actu	al fue	l usage for this f	uel type	for the past f	ive years (pas	t year if	new source):
Year							٠.	
Throughput (Units:)							:	
If the emissi	on unit combusts mor	e than	one type of fue	l, attach	additional pa	ges so that all	fuel typ	es are listed.
Unit ID#:			Maximum Ra	ed Capa	city of Unit:	:	+	MMBtu/hr
Unit Name/Description	on:	•						
Co	omplete the following	infor	mation for each	type of f	uel combuste	d in the emis	sion unit	•
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include ur		Fuel Spec	cifications		rating Limitation include units)
					% Sulfur:			□ N/A
					% Ash:		··· _	
OP Application ON	LY: Provide the actu	al fue	l usage for this i	uel type	for the past f	ive years (pas	t year if	new source):
Year								
Throughput (Units:)		*						
If the emission	unit combusts more t	han o	ne type of fuel,	attach ac	lditional page	s so that all fi	uel types	are addressed.
	If more than two o attach additional							,
8) Potential to E	mit Calculations	Atta	iched? 🛭 X	'ES	<u>.</u> .			
9) OP Application	on ONLY: Actua	l Em	ission Calcu	lations	Attached	? YES		
10) Additional I	nformation Attac	ched	? YES	\boxtimes	NO	-		



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ľ	ID	E	Q	F	ac	il	it	У.	ID)#	•	8	4()6	9												F	'n	n	is	S	0	n	Ι	ď	ir	١t	Ι	d	eI	ıt	f	C	at	ic	n	#]	E)	P		3										

Section 0.5:	Co	ntre	mea Er	11122	ion Poli	it (with	10UU	соп	idus	stio	n)	
IMPORTANT: READO NOT use pencil to									RE CO	MPL	LETING.	
				(General In	formatio	n					
1) Control Equipme	ent (CI	E) ID#	: EP - 3			2) CE Insta	allatio	n Date:			☐ New	Unit
3) CE Name/Descri	ption:	Hamı	mermill Bag	ghouse	e '							
]	Depen	ding o	n the type of	contre	ol device, yo	u may need	to con	nplete a	section	n in 1	Form 7.0	·
					4) Unit In	formatio	n		_			
-	List a	ll the e	emission uni	ts that	are controlle	d by the cor		<u> </u>			l above:	•
Unit ID#	:	U	Init Type ¹		Unit N	ame		cimum (include		ity	Installation Date	New Unit
•		Ня	mmermill		Hamme	rmill		-				
•		(Conveyor		Conve	yor		-				
								-				
	\perp						<u> </u>					
				\longrightarrow								
			<u>.</u>									ᆜ
	-+		···									ᆜ
If more than eight unit	s' emiss	sions are	controlled by	this piec	e of control equ	ipment, attach	an addi	tional pag	e so tha	t all er	mission units are accounte	d for
					on Vent, Fermer							
			5)	Stac	k Informa		\Box	N/A				
Height	Тор	Inside	Diameter		Stack Disch	arge	Exit	Velocit	ty of C	as	Exit Temperature	of Gas
					Horizontal							
36 ft		1	ft		Vertical		2	21.34	1	n/s		K
					Vertical wit	h Kain						
				6) Control	Informat	ion					
Pollutant(s) Con	trolled	i	% Contr	rol Effi	iciency -	Pollutan	ıt(s) C	ontrolle	d		% Control Efficience	y
PM/PM10/PN	M2.5		• •	-99%								
				_								
		İ							-		-	
	If the	air po	llution contr	ol dev	ice(s) is a bag	ghouse, com	plete	the follo	owing:	<u> </u>	□ N/A	
- A	ir Flov	w Rate	(dscf/min)					Grain I	Loadin	g (gr	ains/dscf)	
,		3,30	0						0	.01		



	Ш																										H		Ш																														Ш								
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																																																																		Ī	
N	II	H	()]	F٤	ıc	li	ty	I	D	#	•	K,	84	4()(9												E	n	ni	is	S	io	II		P	ì	n	t	I	l	'n	ti	fi	c	at	i	ı	#		E	P	•	3												
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Section 6.5:	Controlled E	mis	sion Poir	ıt (wit	hout co	mbustic	on)
	7)	Con	trolled Unit	Fuel In	formatio	n	
Will any of the units	being controlled by the	e CE	combust fuel (l	ooiler, dry	er, etc)?	No Yes	1
If Yes, Complete the	following information	for e	ach emission u	nit being o	ontrolled th	nat combusts f	uel:
Uṇit ID#:			Maximum Rat	ed Capaci	ty of Unit:	* .	MMBtu/hr
Unit Name/Descripti	on:			٠,			7. 1:
Co	emplete the following i	nform	nation for each	type of fu	el combuste	d in the emiss	sion unit:
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	,5 °	Heat Cont (include ur		Fuel Spec	cifications	Operating Limitation (include units)
					% Sulfur:	·	N/A □
OD A - P - d'- ON	TW De it de contract	1 6 1	· · · · · · · · · · · · · · · · · · ·	· .	% Ash:	, -	
OP Application ON	LY: Provide the actual	Ifuel	usage for this i	uel type fo	or the past f	ive years (pas	t year if new source):
Year	-		•			*	
Throughput (Units:)							
If the emission	on unit combusts more	than	one type of fue	l, attach a	dditional pa	ges so that all	fuel types are listed.
Unit ID#:	•	:	Maximum Ra	ted Capaci	ty of Unit:		MMBtu/hr
Unit Name/Descripti	on:		, , , , <u>, , , , , , , , , , , , , , , </u>				
Co	emplete the following i	nform	nation for each	type of fu	el combuste	d in the emiss	sion unit:
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include ur	4 .	Fuel Spec	cifications	Operating Limitation (include units)
,					% Sulfur:	,	□ N/A
					% Ash:	<u> </u>	
OP Application ON	LY: Provide the actua	l fuel	usage for this	fuel type f	or the past f	ive years (pas	t year if new source):
Year							
Throughput (Units:)					1.	<u>.</u>	
If the emission	unit combusts more th	an on	ne type of fuel,	attach add	itional page	s so that all fu	uel types are addressed.
	If more than two of attach additional						
8) Potential to E	mit Calculations A	Atta	ched? . 🔀 Y	ES .			
9) OP Application	on ONLY: Actual	Emi	ission Calcu	lations 2	Attached	? YES	
10) Additional I	nformation Attacl	hed?	YES		NO		



F	A	CI	L	Π	Y	N	ΑI	M	E	1	٨I	tl	Į,	١.	L	L	C																			j	D/	\ 7	ΓE		J٤	ın	u	ır	y ź	20	1	,			Ī
N	D	E()]	Fa	ci	lit	y l	D	#		34	0	69	<u> </u>										Cr	n	is	Si	10	90	in	t	ld	eı	ıti	fi	Ca	ıti	01	1#	_	E)	P :	6								

Section 6.5: Controlled Emission Point (without combustion)

Section 0.5.	CUL	iti oncu E	11112	31011 1 011	it (With	IV	tt combus	illo		
IMPORTANT: READO NOT use pencil to								MPL	ETING.	
		•		General In	formatio	n				
1) Control Equipme	nt (CE)	ID#: EP - 6			2) CE Insta	allat	ion Date:		☐ New	Unit
3) CE Name/Descri	ption: F	ermentation &	Distil	llation						
I	Dependi	ing on the type o	f cont	rol device, yo	u may need	to c	omplete a section	n in l	Form 7.0	
				4) Unit In	formatio	n				
	List all	the emission un	its tha	t are controlle	d by the cor	itrol	equipment ider	tified	above:	
Unit ID#		Unit Type ¹		Unit N	ame	M	(include units)	ity	Installation Date	New Unit
•		Fermenters		Ferment	ers (4)		•			
•		Beer Well		Beer V			•			
-		Tanks		1 Mash T Liquefaction Yeast Propaga 2 Stillage	n Tank, 1 ntion Tank,		·			
-		Beer Stripper		1 Beer St	ripper					
, -	D	istillation Colu	mn	1 Distillation	Column		•			
· -		Molecular Sieve		2 molecula		L	-			
If more than eight units Unit	Types co	ons are controlled by ould include: Dryer,	this pie Distillat	cce of control equation Vent, Fermer	ipment, attach	an ad	lditional page so tha ump Pit, Convevor.	t all en Loado	nission units are accounte ut Spout, etc.	d for.
				ck Informa			N/A			
Height	Top Ir	nside Diameter		Stack Disch		Ex	cit Velocity of C	as	Exit Temperature	of Gas
		•		Horizontal						
63 ft	1.	.67 ft	Σ	☑ Vertical			ı	n/s	•	K
				Vertical wit	h Rain					
		·	(6) Control	Informat	ion				
Pollutant(s) Cont	trolled	% Cont	rol Ef	ficiency	Pollutan	t(s)	Controlled		% Control Efficience	у
N/A	*						,		-	
										-
	If the ai	ir pollution cont	rol dev	vice(s) is a bag	ghouse, com	plet	e the following:	Σ	N/A	_
Ai	r Flow	Rate (dscf/min)					Grain Loadin	g (gra	ains/dscf)	•
						_				



Section 6.5:	Controlled E	<u>mission Poir</u>	ıt (wit	hout co	mbustic	on)	
	7)	Controlled Uni	t Fuel In	formatio	n		Ţ.
Will any of the units	being controlled by th	e CE combust fuel (boiler, dry	er, etc)?	No 🗌 Yes	, **	t t
If Yes, Complete the	following information	for each emission u	nit being	controlled th	at combusts f	fuel:	
Unit ID#:		Maximum Ra	ted Capaci	ity of Unit:	•	;	MMBtu/hr
Unit Name/Descripti	on:				, ,		
Co	mplete the following i	information for each	type of fu	el combuste	d in the emiss	sion unit:	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Cont (include ur		Fuel Spec	eifications		ng Limitation lude units)
			i .	% Sulfur: % Ash:			□ N/A
OP Application ON	LY: Provide the actua	l fuel usage for this	fuel type f	l	ive years (pas	t vear if ne	w source):
Year		. Tuor usugo Tor timo		· ·	· · · · · · · · · ·		5542 55).
			<u> </u>				
Throughput (Units:)		•	•		•		
If the emission	on unit combusts more	than one type of fue	l, attach a	dditional pa	ges so that all	fuel types	are listed.
Unit ID#:		Maximum Ra	ted Capac	ity of Unit:		-	MMBtu/hr
Unit Name/Descripti	on:		••			•	
Co	mplete the following i	information for each	type of fu	el combuste	d in the emis	sion unit:	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Continuing (include un		Fuel Spec	cifications		ing Limitation lude units)
,				% Sulfur:		-	□ N/A
			<u> </u>	% Ash:	.•	<u>L. </u>	
OP Application ON	LY: Provide the actua	Il fuel usage for this	fuel type f	or the past f	ive years (pas	st year if ne	w source):
Year							
Throughput (Units:)				•			' '
If the emission	unit combusts more th	nan one type of fuel,	attach add	litional page	s so that all f	uel types ar	e addressed.
		the emission units be pages so that all con					
8) Potential to E	mit Calculations	Attached? 🛛 Y	YES				1
9) OP Application	on ONLY: Actual	Emission Calcu	lations	Attached?	YES		
10) Additional I	nformation Attac	hed? YES	\boxtimes	NO.		4	



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	•	L	H		Q		ŀ	2(ci	li	ty	1		•	Ħ		S -	4(U	b	<u>y</u>													ľ	ı	n	ı	S	SI	0	n	ľ	D	П	t	l	d	le	I	t	ıt	l	CE	ıt	ľ	O I	n	Ħ		Ę	ľ			9							Щ	4	<u> </u>		<u> </u>	

Section 6.6:	Cor	ntrolled E	mis:	sion Poir	nt (with	<u>combustio</u>	<u>n)</u>		
IMPORTANT: READO NOT use pencil to							MPL	ETING.	
				General In	formatio	n			
1) Control Equipme	ent (CE)	() ID#: EP - 9			2) CE Ins	tallation Date:		□ No	ew Unit
3) CE Name/Descri	ption: I	Digester Flare							
4) Maximum Rated	Capaci	ity of CE:			-			54 MME	tu/hr
5) If this control equ	-			•		e: dizer N/A Ot	her _		
		<u> </u>			ag				
				_				•	
		<u>"</u>	7) E	Emission U	nit Inforn	nation			
I	List all	the emission unit	s that	are controlled	by the cont	trol equipment that		usts fuel:	
Unit ID#	•	Unit Type ¹		Unit Na	ame	Maximum Capac (include units)	ity	Installation Date	New Unit
		Digester System	n	Digester S	System	-	·		
	_								
	_	•							
		·							
									┝╠┈
If more than six units	' emissio	ons are controlled by	his piec	l ce of control equip	pment, attach a	n additional page so that	all em	I ission units are accounte	d for.
						menter, Paint Booth, etc		·	
		8) :	Stack	k Informati	on		<u> </u>		
Height	Top I	Inside Diameter		Stack Disch	arge	Exit Velocity of C	3as	Exit Temperature	of Gas
				Horizontal					
33 ft	10	0.42 ft	\boxtimes	Vertical		1	m/s		K
				Vertical with	Rain cap				
				9) Control	Informat	ion			
Pollutant(s) Con	trolled	% Cont	rol Ef	ficiency	Pollutan	t(s) Controlled		% Control Efficien	су
		:							
		If additional poll	utants	are being con	trolled, atta	ch additional inforn	nation	1.	



***************************************	F	A	C	Ί	T	Г	r	Y	1	I/	V	V	I			A		t	E	n	L	I	(7																										D) A	Ŋ	ΓI	E		J٤	ı	ייו	ıa	r	v	2	0	1.	3					
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	N	D	ŀ	()	F	a	Ci	li	ty	,]) 	#:		84	1()(55)												F	n	n	is	S	io	I	1	P	0	in	t	I	de	en	iti	íi I	C	a۱	hi	DÌ	1	:	Ι)		9											

Section 6.6:	Controlled Er	<u>nission Poi</u>	nt (wi	th comb	ustion	1)	$x = \frac{1}{4} \left(\frac{\lambda_1}{\lambda_2} + \frac{\lambda_2}{\lambda_2} \right)$
	10) Co	ntrol Equipm	ent Fuel	Informati	on		
Complete t	he following information					ontrol eq	uipment:
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Cor (include t		Fue Specifica	- ' ' '		ating Limitation nclude units)
Biogas	54 MMBtu/hr	630 Btu	/scf	% Sulfur: 1 % Ash:	N/A		⊠ N/A
OP Application ON	LY: Provide the actual	fuel usage for this	fuel type	for the past fi	ive years (past year	r if new source):
Year			, .		•		
Throughput (Units:)	,					* 4 *	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Con (include)		Fue Specifica			rating Limitation nclude units)
· · · · · · · · · · · · · · · · · · ·				% Sulfur: % Ash:			□ N/A
OP Application ON	LY: Provide the actual	fuel usage for this	fuel type	for the past f	ive years (past yea	r if new source):
Year							
Throughput (Units:)							,
If the control equi	pment combusts more	than two types of	fuel, attach	additional p	ages so th	at all fue	l types are listed.
11) (Control Equipmen	t New Source	Perform	ance Stan	dard Ap	plicab	ility
For each piece	of control equipment the I	at combusts fuel,	indicate wh	nether the fol	lowing NS	SPS' app	ly to each unit.
CE ID#	CE Name/De	escription		New Source	ce Perform	nance S	tandards
EP - 9	Digester Flare	·	☐ NSPS	, Subpart D , Subpart Da , Subpart Db	Ot	SPS Sub her one	part Dc



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NI)E	0	F	ac	ili	it	, I	D	#	•	84	4()6	9]	Ei	m	is	Si	0	n	P	Oi	in	t	Ic	le	n	tií	ī (a	ti	ΟI	ı#		E	P		9										
						ĺ				Ī															Ī																					i													-	

Section 6.6:	Controlled E	<u>lmi</u>	ssion Poir	ıt (wi	th comb	oustion)		·
	12	2) Ca	ontrolled Un	it Fuel	Informati	on		
Will any of the units	being controlled by t	he CE	combust fuel (boiler, di	yer, etc)?	No Yes		
If Yes, Complete the	following informatio	n for	each emission u	nit being	controlled t	hat combusts f	uel:	
Unit ID#:			Maximum Ra	ted Capa	city of Unit:			MMBtu/hr
Unit Name/Descripti	on:							
Co	mplete the following	infor	mation for each	type of i	fuel combusto	ed in the emiss	sion unit	:
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include u		Fuel Spe	cifications		rating Limitation include units)
					% Sulfur:			□ N/A
		1.0	1 0 1:	0 1.	% Ash:		<u></u>	
OP Application ON	LY: Provide the actu	al fue	l usage for this	tuel type	for the past i	ive years (pas	t year if	new source):
Year								<u> </u>
Throughput (Units:)								
If the emission	on unit combusts mor	e than	one type of fue	l, attach	additional pa	ages so that all	fuel typ	es are listed.
Unit ID#:			Maximum Ra	ted Capa	city of Unit:			MMBtu/hr
Unit Name/Descripti	on:				•			,
Co	mplete the following	infor	mation for each	type of i	fuel combusto	ed in the emiss	sion unit	•
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include u		Fuel Spe	cifications		rating Limitation include units)
					% Sulfur:			
					% Ash:			□ N/A
OP Application ON	LY: Provide the actu	al fue	l usage for this	fuel type	for the past 1	five years (pas	t year if	new source):
Year								
Throughput (Units:)								
If the emission	on unit combusts mor	e than	one type of fue	l, attach	additional pa	ages so that all	fuel typ	es are listed.
·	If more than two o attach additional							
13) Potential to	Emit Calculation	s Atı	tached? 🛚	YES				
14) OP Applicat	ion ONLY: Actu	al Eı	mission Calc	ulation	s Attache	d? 🗌 YES		
15) Additional I	nformation Attac	hed	? YES	\boxtimes	NO			



F.	(OI.	L	Π		Y	N	A	Ţ	И	F	٠		A	ì	t	E i	n.		L	C																								1),	۸	Γ	E	J	ar	11	12	r	v	2	0	1,	3				
N.)]	E(Ç	F	20	i	li	y	I	D	ħ	•	1	84	1()(9												E	ı	n	is	S	io	n	?(ù	ıt	1	d	e	nı	if	i	a	ti	0	n	¥:	E .	P		1	2									

Section 6.6:	Contr	olled En	nission Poir	nt (with	<u>combustion</u>	n)		1.
IMPORTANT: READO NOT use pencil to						MPLETING.		
			General In	formatio	n	•		
1) Control Equipme	ent (CE) ID	#: EP - 12		2) CE Ins	tallation Date:		□N€	w Unit
3) CE Name/Descri	ption: Loa	dout Vapor C	Combustion Unit		,			•
4) Maximum Rated	Capacity of	of CE:				4.8	ммв	tu/hr
5) If this control eq	-		· .		e: dizer 🛛 N/A 🗌 Ot	her		
6) If this control eq	uipment is	•	thermal oxidation Online Offline		em, indicate the type Other	e of regeneration	n: 🖟	
			7) Emission U	nit Inforn	nation	•		
1	List all the	emission units	that are controlled	by the con	trol equipment that			
Unit ID#		Unit Type ¹	Unit N	ame	Maximum Capac (include units)		ion Date	New Unit
.		Loadout	Truck Lo	oadout	-	;		
· · · · · · · · · · · · · · · · · · ·								<u> </u>
	·			· · · · · · · · · · · · · · · · · · ·	· ·			├
				-				
If more than six units	'emissions ar				an additional page so that rmenter, Paint Booth, etc		are accounte	d for.
,			tack Informati		N/A		· · · · · · · · · · · · · · · · · · ·	-
Height	Top Insid	le Diameter	Stack Disch	•	Exit Velocity of C		nperature	of Gas
20 ft	1	ft	☐ Horizontal Vertical ☐ Vertical with	Rain cap	. 1	m/s		K
			9) Control	Informat	ion			•
Pollutant(s) Con	trolled	% Contr	ol Efficiency	Pollutar	nt(s) Controlled	% Contro	l Efficien	су
							• .	
		-				•		
	TC	1122 1 2	1	-411-1	1. 1122. 1: 6			
1	, II a	uaitionai polli	utants are being coi	ntronea, atta	ach additional inform	наноп.		



FACILITY NAM	1919191						uary 2013
NDEQ Facility ID	#:84069		Emission	Point Iden	tification	#: EP -	12
Section 6.6:	Controlled E	mission Po	int (wi	h comb	oustior	1)	
		ontrol Equipm				- /	
Complete t	he following informat		_			ontrol eq	uipment:
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Co (include		Fue Specifica	- '		rating Limitation include units)
Waste Gas	4.8 MMBtu/hr	850 Bt	u/scf	% Sulfur: % Ash:	N/A		⊠ N/A
OP Application ON	LY: Provide the actua	I fuel usage for thi	s fuel type i	for the past f	ive years (past yea	r if new source):
Year							
Throughput (Units:)				<u>.</u>			
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)	Heat Co (include		Fue Specific	_		rating Limitation include units)
			•	% Sulfur: % Ash:			□ N/A
OP Application ON	LY: Provide the actua	l fuel usage for thi	s fuel type i	for the past f	ive years (past yea	r if new source):
Year							
Throughput (Units:)							
	pment combusts more	than two types of	fuel, attach	additional p	ages so the	at all fue	l types are listed.
	Control Equipme						
	of control equipment t mplete and submit the						
CE ID#	CE Name/D	escription		New Source	ce Perform	nance S	Standards
EP - 12	Loadout Vapor Co	mbustion Unit	□ NSPS,	Subpart D Subpart Da Subpart Db	☐ Ot	SPS Subpherone	



TACILITI NAMI	e: Altell, LLC		 	•		_ DATE:	Januar	<u>y 2013</u>
NDEQ Facility ID	#: 84069		Eı	mission I	Point Iden	tification#: <u>I</u>	E P - 12	
• • •			<i>:</i> ,			. •	•	
Section 6.6:	Controlled E	.mis	sion <u>Poir</u>	ıt (<u>wit</u>	h comb	oust <u>ion)</u>	(
	12	2) Con	itrolled Uni	t Fuel I	nformatic	on'		a I
Will any of the units	being controlled by th	ne CE c	combust fuel (t	oiler, dry	er, etc)?	No X Yes		·
If Yes, Complete the	following information	n for ea	ach emission w	nit being (controlled th	at combusts fi	uel:	
Unit ID#: EP - 12		Ţ	Maximum Rat	ed Capaci	ity of Unit:	· · · · · · · · · · · · · · · · · · ·	•	4.8 MMBtu/hr
Unit Name/Description	on: Vapor Combusti	on Uni	it	· . ·				
Co	omplete the following		ation for each	type of fu	el combuste	d in the emiss	ion unit	
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Conto (include un		Fuel Spec	cifications		rating Limitation include units)
Waste Gas	4.8 MMBtu/hr		850 Btu/s	ef	% Sulfur: 1 % Ash:	N/A		⊠ N/A
OP Application ON	LY: Provide the actua	al fuel ı	usage for this f	uel type f	or the past f	ive years (past	year if	new source):
Year							·	
Throughput (Units:)					,			
	on unit combusts more	e than c	one type of fue	l, attach a	dditional pa	ges so that all	fuel typ	es are listed.
Unit ID#:	· · · · · · · · · · · · · · · · · · ·		Maximum Rat	ed Capaci	ity of Unit:		:	MMBtu/hr
Unit Name/Description	on:			·	·	<u></u>		
Со	omplete the following		ation for each	type of fu	el combuste	d in the emiss	ion unit	: 1
Type/Grade of Fuel Combusted	Maximum Fuel Capacity (include units)		Heat Cont (include un		Fuel Spec	cifications		rating Limitation include units)
,					% Sulfur:			
			· · · · · · · · · · · · · · · · · · ·	·	% Ash:		· 	∐ N/A
OP Application ON	LY: Provide the actua	al fuel 1	usage for this f	uel type f	or the past f	ive years (past	t year if	new source):
Year		l						1
Throughput (Units:)				.,				
If the emission	on unit combusts more	e than c	one type of fue	l, attach a	dditional pa	ges so that all	fuel typ	es are listed.
	If more than two of attach additional							
13) Potential to I	Emit Calculation	s Atta	iched?	YES	•.	•		•
14) OP Applicat	ion ONLY: Actua	al Em	ission Calc	ulations	Attached	i? 🗌 YES		
15) Additional I	nformation Attac	ched?	YES	\boxtimes	NO			



Rev 12/10

Air Quality Permitting Application Form 6.0: Emission Point Information

FACILITY NAME: AltEn,	ELC	D	PATE: January 2013
NDEQ Facility ID#: 84069			

Section 6.7.1: Tank Emissions – Tank Summary

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING

Do NOT use pencil to fill out this application. Please type responses or print using black ink.

Tank Summary

) Emission Point ID #	2) Emission Unit ID #	3) Tank Contents	4) Maximum Capacity (gallons)	5) Installation Date	New Unit
TK – 801A	TK – 801A	Anhydrous Ethanol	22,600		
TK – 801B	TK – 801B	Anhydrous Ethanol	22,600		
TK - 803	TK – 803	190 Proof Ethanol	22,600		
TK – 810	TK - 810	Denatured Ethanol	535,830		
TK – 808	TK – 808	Denaturant	22,600		
					
			·	·	

If there are more than ten storage tanks at this facility, attach additional information so that each tank is contained in the summary table.

Page 1 of 3



Form 6.0, Section 6.7



FACILITY NAME:	AltEn, LLC DATE: January 2013	
NDEQ Facility ID#:	84069 Emission Point Identification#(s): TK – 801A	

Note: This page must be completed for each tank currently used in the storage of an organic liquid or material containing hazardous air pollutants. A single section may be completed for several tanks ONLY if the tanks are identical in size and contents. In addition to completing this section, the most recent TANKS Program must be completed for each storage tank. The "Detailed Format" output should be printed out and attached to this form. You can obtain the TANKS program at http://www.epa.gov/ttn/chief/software/tanks/. If you are unable to complete this program, contact the Department for assistance.

Section 6.7.2: Tank Emissions – Tank Information

IMPORTANT: REAL Do NOT use pencil to fill	D THE INSTRUCTIO l out this application. Pl					ORE COMP	PLETING	
		Ta	nk In	formation				
1) Emission Unit ID#(s	s): TK – 801A			2) Installat	ion Date:			New Unit
3) Tank Name/Descrip	tion: Anhydrous Eth	anol Stora	ge Tan	k		•		
4) Identify the material	(s) contained in this t	ank: Anhyo	lrous E	thanol				
5) TANKS program out	tput attached? 🛛 Y	ÆS .		6) TANKS	Program Ver	sion: 4.09d		□ N/A
7) Maximum Capacity	22,	600 Ga	llons	8) Max. W	orking Volun	ne:	22,600	Gallons
9) Tank Dimensions:	Height 16	Feet	Lengt	h -	Feet	Diameter	15.5	Feet
10) Tank Orientation:	∨ Vertical			Tank Loca	ition:	Above Grou Inderground		
11) Type of Tank: 🛛 I	Fixed Roof 🗌 Exter	nal Floating	g Roof [Internal I	Floating Roof	Other:	1	
12) Type of Primary So	eal (if using a floating	; roof): 🔲 I	Mechan	ical Shoe	Liquid Mou	inted 🔲 V	apor Mounted	□ N/A
	13)	Air Poll	ution (Control E	quipment	٠		
Is then	re an air pollution con	trol device	(s) asso	ciated with t	his unit?	YES	⊠ NO	
Control Equipment ID#	Type of Control Equipment	Polluta	nt(s) C	ontrolled	% Control	Efficiency	Installat	on Date
, -						* ** .		1 1
	If additional pollu	ıtants arė be	eing cor	ntrolled, atta	ch additional	information	. ,	
	14) New So	urce Per	forma	nce Stand	dard Appli	cability	· . ·	
This tank is subject to: If unknown contact the additional information.	e department for	□ NSPS, S □ NSPS, S	ubpart :	K	NSPS, S ☐ Other: _			,
	15) Additional	Informa	tion A	ttached?	☐ YES	S N	0	



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Section 6.7.3: Tank Emis	<u>ssions – Prod</u>	<u>uct Informat</u>	ion ·	
IMPORTANT: READ THE INSTRUCT Do NOT use pencil to fill out this application.			EFORE COMPLETIN	NG
Do NOT use pener to the out this appreciation.		ormation	· · ·	·
1) Emission Unit ID#(a). TV 901A	1 aux III	oi mation		
1) Emission Unit ID#(s): TK - 801A		Type Das		
2) Is this tank(s) restricted to storing only		YES NO	10	
If this tank stores more than one product, (Note: The Product Specifications section				
	3) Product S	pecifications	<u></u>	
Primary Product Name: Anhydrous Etha	nol	(A) Total VOC Emis	ssions: 1,398.50	lb/year
		В)	HAP E	missions
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B)	(D) = (C)/2000
Acetaldehyde	0.0	002	(lb/yr) 0.028	(ton/yr) 0.00014
Methanol	 	002	0.028	0.00014
Acrolein		001	0.014	0.00007
Formaldehyde	0.0	001	0.014	0.00007
		_		
	<u></u>			
Total HAP Emissions	-		0.084	0.00042
	3) Product S	pecifications		
Additional Product Name:	·	(A) Total VOC Emi		lb/year
Hazardous Air Pollutant		B)		missions
Hazardous Air Pollutant	Weight % HAP i	n VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
· · · · · · · · · · · · · · · · · · ·			(10/31)	(toli/yl)
			_	
			· · · · · · · · · · · · · · · · · · ·	
			-	
T. IVAND	C			
Total HAP Emissions t			a attach a d disi 1	
Note: If this tank(s) cont	ains more than two di	merent products, pleas	e aπach additional pa	ges.

F	4	ΞI	L	H	Y	ì	۱A	M	II.		A	llt	E	n,	L	L	C																		D	A	H	<u>:</u>	J٤	ın	ua	ıry	y 2	01	3			
N	D.	E	5	F	ac	ili	ty	П) #		84	10	69)								E)	m	ISS	io	n	P	oi	nt	Ic	le	nt	ifi	ca	tic	n	#(S)		· K		8	01	В				

Note: This page must be completed for each tank currently used in the storage of an organic liquid or material containing hazardous air pollutants. A single section may be completed for several tanks ONLY if the tanks are identical in size and contents. In addition to completing this section, the most recent TANKS Program must be completed for each storage tank. The "Detailed Format" output should be printed out and attached to this form. You can obtain the TANKS program at http://www.epa.gov/ttn/chief/software/tanks/. If you are unable to complete this program, contact the Department for assistance.

Section 6.7.2: Tank Emissions – Tank Information

Section 017121	A WHILE ENTINGE	UIIU I	COLINA	LIIIIVIII	Ittion			
IMPORTANT: READ Do NOT use pencil to fill of	THE INSTRUCTION out this application. Ple					ORE COMP	LETING	,
	· ·	Ta	nk In	formation	1			. ,
1) Emission Unit ID#(s)	: TK - 801B			2) Installat	ion Date:			New Unit
3) Tank Name/Descripti	on: Anhydrous Etha	nol Stora	ge Tan	k .	1 .			1
4) Identify the material(s) contained in this ta	nk: Anhy o	lrous E	thanol				
5) TANKS program outp	out attached? X	ES		6) TANKS	Program Vers	sion: 4.09d		□ N/A
7) Maximum Capacity:	22,	600 Ga	llons	8) Max. W	orking Volun	ne:	22,600	Gallons
9) Tank Dimensions:	Height 16	Feet	Lengt	h -	Feet	Diameter	15.5	Feet
10) Tank Orientation:	✓ Vertical ☐ Horizontal	· ·	,	Tank Loca	ition:	hove Grou		
11) Type of Tank: X	ixed Roof 🗌 Extern	al Floating	g Roof	Internal I	Floating Roof	Other:		. •
12) Type of Primary Sea	al (if using a floating	roof): 🔲 I	Mechan	ical Shoe	Liquid Mou	nted 🔲 V	apor Mounted	□ N/A
	13) .	Air Pollı	ution	Control E	quipment	•		
Is there	an air pollution cont	rol device((s) asso	ciated with t	his unit?	☐ YES	⊠ NO	•
Control Equipment ID#	Type of Control Equipment	Polluta	nt(s) C	ontrolled	% Control I	Efficiency	Installatio	n Date
		:		,				· · · ·
	If additional pollu	tants are be	eing co	ntrolled, atta	ch additional	information	·	
	14) New Soi	urce Per	forma	nce Stanc	lard Applic	cability		• .
This tank is subject to: If unknown contact the additional information.	department for	□ NSPS, S □ NSPS, S			NSPS, S ☐ Other: _	ubpart Kb		
	15) Additional l	Informa	tion A	ttached?	☐ YES	S 🛛 N	0	

FACILITY NAME: AltEn	n; LLC DATE: January 2013	
NDEQ Facility ID#: 84069	Emission Point Identification#(s): TK-801B	
11000 1 acmy 10 m. 0 1007	Emission 1 our Identification#(5). 1 X = 801B	

Section 6.7.3: Tank Emissions – Product Information

IMPORTANT: READ THE INSTRUCTI Do NOT use pencil to fill out this application.	ONS ACCOMPANYI Please type responses of	NG THIS SECTION B or print using black ink.	EFORE COMPLETIN	NG .
		ormation		
1) Emission Unit ID#(s): TK - 801B				
2) Is this tank(s) restricted to storing only of	one product?	YES NO		
If this tank stores more than one product, h (Note: The Product Specifications section				
	3) Product S	pecifications		
Primary Product Name: Anhydrous Ethan	nol	(A) Total VOC Emis	sions:	1,398.50 lb/year
		B)	HAP Er	nissions
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
Acetaldehyde	0.0	002	0.028	0.00014
Methanol	0.0	002	0.028	0.00014
Acrolein	0.0	001	0.014	0.00007
Formaldehyde	0.0	001	0.014	0.00007
Total HAP Emissions	from Primary Produc	•	0.084	0.00042
IVAI IIAI Liiiissiviis	· · · · · · · · · · · · · · · · · · ·		V.V04	U.UUU42
Additional Product Name:	3) Product S	pecifications (A) Total VOC Emis	sions:	lb/year
		<u>. </u>	HAP Et	nissions
Hazardous Air Pollutant	•	B) n VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
	•			
			•	
		,		
		·		:
Total HAP Emissions fr	rom Additional Produ	ıct		
Note: If this tank(s) conta	ins more than two di	fferent products, please	e attach additional pa	ges.

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Note: This page must be completed for each tank currently used in the storage of an organic liquid or material containing hazardous air pollutants. A single section may be completed for several tanks ONLY if the tanks are identical in size and contents. In addition to completing this section, the most recent TANKS Program must be completed for each storage tank. The "Detailed Format" output should be printed out and attached to this form. You can obtain the TANKS program at http://www.epa.gov/ttn/chief/software/tanks/. If you are unable to complete this program, contact the Department for assistance.

Section 6.7.2: Tank Emissions – Tank Information

IMPORTANT: REAL Do NOT use pencil to fill	D THE INSTRUCTION out this application. Ple					ORE COMP	LETIN	G	
٠.	, ē,	Ta	nk Įn	formation		-		118	
1) Emission Unit ID#(s	s): TK - 803	*		2) Installat	ion Date:	· · · · ·			New Unit
3) Tank Name/Descrip	tion: Off – Spec Tank			. •			·	. : ! <u>;</u>	
4) Identify the material	(s) contained in this ta	nk: 190 Pı	oof Et	hanol					
5) TANKS program out	tput attached? X	ES	,	6) TANKS	Program Ver	sion: 4.09d	:		□ N/A
7) Maximum Capacity	22,60	0 Ga	llons	8) Max. W	orking Volum	ne:	, .	22,600	Gallons
9) Tank Dimensions:	Height 16	Feet	Lengt	h -	Feet	Diameter	•	15.5	Feet
10) Tank Orientation:	✓ Vertical ☐ Horizontal			Tank Loca	ition:	Above Ground			
11) Type of Tank: 🛛 l	Fixed Roof Extern	al Floating	g Roof	Internal I	loating Roof	Other: _			• •
12) Type of Primary So	eal (if using a floating	roof): 🔲 I	Mechan	ical Shoe	Liquid Mou	inted 🔲 Va	apor Mo	ounted [].N/A
	13)	Air Pollı	ution	Control E	quipment	•	٠,	: *	
Is then	e an air pollution cont	rol device	(s) asso	ciated with t	his unit?	☐ YES	\boxtimes N	O ·	•
Control Equipment ID#	Type of Control Equipment	Polluta	nt(s) C	ontrolled	% Control	Efficiency	In	stallatio	n Date
		,							
	If additional pollu	tants are be	eing co	ntrolled, atta	ch additional	information.			• •
	14) New Sou	ırce Per	forma	nce Stanc	lard Appli	cability			:
This tank is subject to: If unknown contact the additional information	department for] NSPS, S] NSPS, S			⊠ NSPS, S ☐ Other: _	Subpart Kb		1.	
	15) Additional l	Informa	tion A	ttached?	YES	s 🛭 N	0		

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Section 6.7.3: Tank Emissions – Product Information

IMPORTANT: READ THE INSTRUCTION	IONS ACCOMPANYI	NG THIS SECTION B	EFORE COMPLETIN	NG
Do NOT use pencil to fill out this application.	Please type responses of	or print using black ink.		
	Tank Inf	ormation		
1) Emission Unit ID#(s): TK - 803				
2) Is this tank(s) restricted to storing only	one product?	YES NO		
If this tank stores more than one product, h				
(Note: The Product Specifications section	(below) must be filled	d out for each product	stored)	
	3) Product S	pecifications		<u>_</u>
Primary Product Name: 190 Proof Ethano	ol	(A) Total VOC Emis	ssions: 2,428.02	lb/year
	(1	B)	HAP Er	nissions
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B)	(D) = (C)/2000
		·	(lb/yr)	(ton/yr)
Acetaldehyde		002	0.049	0.00024
Methanol		002	0.049	0.00024
Acrolein		001	0.024	0.00012
Formaldehyde	U.U	001	0.024	0.00012
	1.			
Total HAP Emissions	from Primary Produc	t	1.46	0.00073
	3) Product S	pecifications		
Additional Product Name:		(A) Total VOC Emis	ssions:	lb/year
		B)	HAP Er	
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B)	(D) = (C)/2000
			(lb/yr)	(ton/yr)
				
·				
Total HAP Emissions fi	rom Additional Produ	ict		
Note: If this tank(s) conta	ains more than two dif	fferent products, pleas	e attach additional pag	ges.

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Note: This page must be completed for each tank currently used in the storage of an organic liquid or material containing hazardous air pollutants. A single section may be completed for several tanks ONLY if the tanks are identical in size and contents. In addition to completing this section, the most recent TANKS Program must be completed for each storage tank. The "Detailed Format" output should be printed out and attached to this form. You can obtain the TANKS program at http://www.epa.gov/ttn/chief/software/tanks/. If you are unable to complete this program, contact the Department for assistance.

Section 6.7.2: Tank Emissions – Tank Information

Section 0.7.2:	Tank Emissi	0112 - 1	lank		lation		, , , , , , ,	
IMPORTANT: REA Do NOT use pencil to fil	D THE INSTRUCTION out this application. Ple					ORE COMP	LETING	•
		Ta	nk In	formation	i			
1) Emission Unit ID#(s	s): TK - 808			2) Installat	ion Date:			New Unit
3) Tank Name/Descrip	tion: Denaturant Stor	rage Tank					-	
4) Identify the material	(s) contained in this ta	nk: Denat	urant (Natural Ga	soline)	.,		
5) TANKS program ou	tput attached? X	ES		6) TANKS	Program Ver	sion: 4.09d		□ N/A
7) Maximum Capacity	: 22,	600 Ga	llons	8) Max. W	orking Volun	ne:	22,600	Gallons
9) Tank Dimensions:	Height 16	Feet	Lengt	h -	Feet	Diameter	15.50	Feet
10) Tank Orientation:	∨ Vertical			Tank Loca	tion:	Above Ground	• • •	
11) Type of Tank: 🔲	Fixed Roof Extern	al Floating	Roof [Internal	Floating Roo	f Other:		
12) Type of Primary S	eal (if using a floating	roof): 🛛 🛚	Mechar	ical Shoe [Liquid Mo	unted 🔲 V	apor Mounted	□ N/A
•	13)	Air Poll	ution (Control E	quipment	* 25		
Is the	re an air pollution cont	rol device	(s). assoc	ciated with t	his unit?	☐ YES	⊠ NO	
Control Equipment ID#	Type of Control Equipment	Polluta	int(s) Co	ontrolled	% Control	Efficiency	Installatio	n Date
							2.2	
,	If additional pollu	tants are b	eing cor	ntrolled, atta	ch additional	information.		
	14) New Sor	urce Per	forma	nce Stand	dard Appli	cability		· · · · · · · · · · · · · · · · · · ·
This tank is subject to: If unknown contact the additional information	e department for	□ NSPS, S □ NSPS, S			NSPS, S ☐ Other: _	Subpart Kb	. * * * .	
	15) Additional l	Informa	tiọn A	ttached?	☐ YES	S 🛛 N	O	

FACILITY NAME:	AltEn, LLC		DATE: January 2013
NDEQ Facility ID#:		Emission Point Identifica	

Section 6.7.3: Tank Emissions – Product Information

IMPORTANT: READ THE INSTRUCTION NOT use pencil to fill out this application.	ONS ACCOMPANYI Please type responses of	NG THIS SECTION B	EFORE COMPLETIN	NG
	Tank Inf	ormation		
1) Emission Unit ID#(s): TK - 808	_			
2) Is this tank(s) restricted to storing only	one product?	YES NO		
If this tank stores more than one product, he (Note: The Product Specifications section				.,,
	3) Product S	pecifications		
Primary Product Name: Denaturant (Nat	ural Gasoline)	(A) Total VOC Emis	sions: 2,047.58	lb/year
	(1	3)	HAP E	nissions
Hazardous Air Pollutant		NOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
Benzene	0.0	025	0.96	0.00048
Hexane	0.	05	19.22	0.0096
Toluene	0.0	005	1.92	0.00096
Xylene	0.0	005	0.19	0.000096
Cumene	0.0	001	0.04	0.000019
Ethylbenzene	0.00	0005	0.02	0.0000096
Carbon Disulfide	0.00	0002	0.01	0.000038
				· · · · · · ·
Total HAP Emissions	from Primary Produc	t	22.36	0.0112
	3) Product S	pecifications		•
Additional Product Name:		(A) Total VOC Emis	ssions:	lb/year
	a	3)		nissions
Hazardous Air Pollutant		VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
			<u></u> .	
		·		•
Total HAP Emissions fi				
Note: If this tank(s) conta	ins more than two di	fferent products, please	e attach additional pa	ges.

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Note: This page must be completed for each tank currently used in the storage of an organic liquid or material containing hazardous air pollutants. A single section may be completed for several tanks ONLY if the tanks are identical in size and contents. In addition to completing this section, the most recent TANKS Program must be completed for each storage tank. The "Detailed Format" output should be printed out and attached to this form. You can obtain the TANKS program at http://www.epa.gov/ttn/chief/software/tanks/. If you are unable to complete this program, contact the Department for assistance.

Section 6.7.2: Tank Emissions – Tank Information

	D THE INSTRUCTION					ORE COMPL	ETING	
Do NOT use pencil to fill								
	-	Ta	nk In	formation	1	**********		,
1) Emission Unit ID#(s	s): TK - 810			2) Installat	tion Date:		. 🗆	New Unit
3) Tank Name/Descrip	tion: Denatured Etha	nol Storaș	ge Tank	c			:	•
4) Identify the material	(s) contained in this ta	nk:.Denat	ured E	thanol				
5) TANKS program out	tput attached? X	ES	•	6) TANKS	Program Ver	sion: 4.09d		□ N/A
7) Maximum Capacity	: 553,8	330 Ga	llons	8) Max. W	orking Volun	ne:	553,830	Gallons
9) Tank Dimensions:	Height 40	Feet	Lengt	h -	Feet	Diameter	47.75	Feet
10) Tank Orientation:	∨ Vertical			Tank Loca	ation:	Above Ground	d i	
11) Type of Tank: 🔲	Fixed Roof Extern	al Floating	Roof	Internal	Floating Roo	f Other:		
12) Type of Primary So	eal (if using a floating	roof): 🛛 1	Mechar	nical Shoe	Liquid Mo	unted 🗌 Va	por Mounted	□ N/A
	13) .	Air Poll	ution (Control E	quipment			
Is then	e an air pollution cont	rol device	(s) assoc	ciated with t	this unit?	☐ YES	⊠ NO	
Control Equipment ID#	Type of Control Equipment	Polluta	nt(s) C	ontrolled	% Control	Efficiency	Installatio	n Date
						-		
•	If additional pollu	tants are be	eing cor	ntrolled, atta	ich additional	information.		•
	14) New Sou	urce Per	forma	nce Stan	dard Appli	cability		
This tank is subject to: If unknown contact the additional information	e department for] NSPS, S] NSPS, S			NSPS, S			
	15) Additional l	Informa	tion A	ttached?	☐ YES	S 🛛 NO	.•	

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Section 6.7.3: Tank Emissions – Product Information

IMPORTANT: READ THE INSTRUCTION NOT use pencil to fill out this application.	IONS ACCOMPANYI Please type responses	NG THIS SECTION B or print using black ink.	EFORE COMPLETIN	NG
		formation		
1) Emission Unit ID#(s): TK - 801				
2) Is this tank(s) restricted to storing only of	· •	YES NO		
If this tank stores more than one product, h (Note: The Product Specifications section				
	3) Product S	Specifications		
Primary Product Name: Denatured Ethan	10l	(A) Total VOC Emis	ssions:	384.35 lb/year
		B)		nissions
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
Acetaldehyde	0.00	0194	0.0397	0.000199
Methanol	0.00	0194	0.0397	0.000199
Acrolein	0.00	0097	0.0199	0.0000993
Formaldehyde	0.00	0097	0.0199	0.0000993
Benzene	0.00	0075	0.0154	0.0000768
Hexane	0.0	015	3.07	0.00154
Toluene		0015	0.0307	0.000154
*Refer to	attached Tanks Cal	culations for addition	nal HAPs	
Total HAP Emissions	from Primary Produc	:t	4.76	0.00238
	3) Product S	pecifications		
Additional Product Name:		(A) Total VOC Emis		lb/year
II Ain Dellose na	l c	В)		nissions
Hazardous Air Pollutant		n VOC Emissions	(C) = (A)x(B) (lb/yr)	(D) = (C)/2000 (ton/yr)
				
				
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Total HAP Emissions fr				
Note: If this tank(s) conta	ains more than two di'	fferent products, please	e attach additional pa	ges.



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Section 6.8: Coon	ng row	er imformau	OII ·		- •	11
IMPORTANT: READ THE Do NOT use pencil to fill out			NG THIS SECTION E		OMPLETIN	IG
Do NOT use penen to mi out	uns applican	Cooling Towe		iack iiik.		
1) 17-4-17-4-17-4-170 17	• •	Cooling Towe	· · · · ·	-	<u> </u>	New Unit
1) Unit ID#: EP - 13			2) Installation Date:		· ·	New Onit
3) Number of Cooling Tower	Cells: 2		4) Drift Loss (DL) F			
3) Number of Cooling Tower	CCIIS. 2		Vendor guarantee	attached?		itted Previously
5) Total Circulation Rate:	,	866,640 gal/hr	Total Circulation Ra	ate:		kgal/year
. 1	6) Tota	al Dissolved Soli	d (TDS) Concent	ration		
Largest Single Sampling:		ppm	Annual Average Ra	ate:		2400 ppm
·		7) Additive	Information			1
Are/Will any chemicals adde			VOC or HAP to be e		the air?	□ YES ⊠ NO
Additive Name		nount Used allon/year)	Product Dens (lb/gallon)		Weig	tht Percent VOC (%)
(1)		•	5			
(2)		-	3			
(3)						
If more than three additi	ves are added	to your cooling tow	er water, attach additi	ional pages	so all addi	tives are listed.
Additive (1)	.,.	Addi	tive (2)		Addit	ive (3)
	ght Percent AP (%)	Hazardous Air Pollutant	Weight Percent HAP (%)		ous Air utant	Weight Percent HAP (%)
	7,					
, , ,						
	*•			ι		
			- · · · · · · · · · · · · · · · · · · ·	-	·	
If more than six H	APs are cont	ained in your additiv	e(s), attach additional	pages so a	ll HAPs are	e listed.
8) Potential to Emit Cal						
		· · · · · · · · · · · · · · · · · · ·) Type	C	e e e e e e e e e e e e e e e e e e e
9) OP Application ONL	A: Actual	Emission Calcu		? YE	3	
10) Additional Informa	tion Attac	hed? YES	⊠ NO		·	



FACILITY NAME:	: AltEn, LLC	DATE: J	anuary 2013
NDEQ Facility ID#:	: <u>84069</u> Em	ission Point Identification #:	EP-14

Section 6.9: Haul Roads

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DARROTTANT. DE ARTHE INCERNICATIONS ACCOMPANIANO THIS SECTION REPORT COMPLETING	
IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING	ř.
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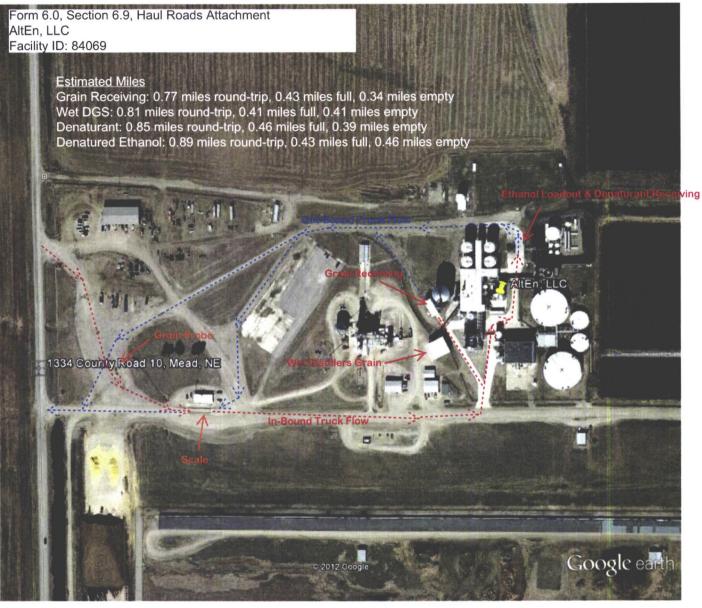
1)	Is the NDEQ haul road spreadsheet attached as a sub	stitute for items (2) through (8) below?
	Yes, attach spreadsheet and skip to item (9) below	No, fill out table below

Haul Road / Traffic Parameters

(2) Activity / Road		(3) d Type /		4) Length (ft)	(5 Truck V (tor	Veight	(6) Ave. Speed	(7) Annual Throughput	(8) Ave. Truck Capacity
Description		Value	empty	full	empty	full	(mph)	(units/yr)	(units/truck)
Denaturant	P	3.00	199,016	233,627	15	40	10 ·	723,000 gallons	7,500 Gal
Denatured Ethanol	P	3.00	7,248,046	7,852,050	15	40	10	24,100,000 gal	7,500 Gal
Grain	P	3.00	17,027,481	21,671,339	15	40	10	237,965 tons	25 Tons
Wet DGS	P	3.00	9,331,849	9,712,741	15	40	10	111,325 tons	25 Tons
·	Ċ								
					_				

- 9) Silt loading/content values were obtained from (i.e. Testing, AP-42 defaults): Facility requested
- 10) To assist in verification of haul road lengths and traffic speeds, please attach a plan view sketch indicating on-site haul road traffic patterns. Traffic sketch attached? ⊠ Yes
- 11) Requested/Existing permit limits for annual throughput? N/A
- 12) Haul road emission calculations are attached or included with your application?

 Yes





feet 1000 meters 300



Air Quality Permitting Application Form 6.0: Emission Point Information

FACILITY NAME:	AltEn, LLC	DATE: January 2013
NDEQ Facility ID#:	84069	Emission Point Identification#: EP - 5

Section 6.10: Equipment Leaks

IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION BEFORE COMPLETING

Do NOT use pencil to fill out this application. Please type responses or print using black ink.

1) Equipment Leak Volatile Organic Compound (VOC) Emission Calculations

(A) Type of Component/Product	(B) Number of Components	(C) Leaking Emission Factor (kg/hr/source)	Uncontrolled VOC Emissions (D) = (B) x (C) x 9.68 (ton/year)	(E) LDAR Control Efficiency (%)	VOC Controlled Emissions $(F) = (D) x [1-(E)]$ $(tons/yr)$
Light Liquid Valves	360	0.00403	14.00	84%	2.24
Light Liquid Pumps	25	0.0199	4.80	69%	1.49
Gas Valves	30	0.00597	1.73	87%	0.22
Pressure Relief Valves	7	0.104	7.02	0%	7.02
Open Pipes	35	0.0017	0.57	0%	0.57
Sample Connections	12	0.015	1.74	0%	1.74
Flanges (Connectors)	455	0.00183	8.03	87%	1.04
Total VOC Emissions	from Equipment Lea	aks	37.89	-	14.33

Additional	Information	Attached?	YES	\boxtimes NO
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Air Quality Permitting Application Form 6.0: Emission Point Information

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Section 6.10: Equipment Leaks

2) Equipment Leak Hazardous Air Pollutant (HAP) Emission Calculations

(G) Product being leaked:	(F) Total Controlled VOC Emissions (from page 1):	tons/year
(H) Hazardous Air Pollutant	(I) Weight % HAP in VOC	(J) = (F) x (I) HAP Emissions (ton/yr)
Formaldehyde	0.000169	0.002
Acetaldehyde	0.155	2.221
Methanol	0.015	0.215
Acrolein	0.0045	0.064
Tota	HAP Emissions from Equipment Leaks	2.503



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		Combust					·			
				ccompanying type responses or			BEFORE COMPI k.	LETIN	NG.	
				General Inf	ormati	on				
1) Control E	quipmen	t ID#: EP - 9			2) Installa	ation Date	e:		☐ New	Unit
3) Control E	quipmen	t Name/Descrip	ption: Digest	ter Flare						
4) Maximun	n Flare R	ated Capacity:	54	MMBtu/hr	5) Maxim	num Pilot	Rated Capacity:	N/A	MMBt	tu/hr
6) Operating	g Hours L	imitation (incl	ude units): 8	,760 hours/year						
				7) Unit Inf	ormati	on	•			
		List all	the emission	n units that are c	ontrolled	by the co	ombustion flare:			
Unit I	 D#	Unit	Type ¹	Unit N	ame		ximum Capacity		Installation Date	New
	•		esters	Digest	ers	+-	(include units)	+		Unit
	,	~-5						\dashv		H
								\dashv		
-										
70	• • • • • • •	• • • • • • • • • • • • • • • • • • • •	11 - 3 1	-1: 1	1	1111	• •			
If an	y units rou	uted to this flare	will combust	their own fuel, cor	mplete Sec	ction 6.1 o	r Section 6.2 for ea	ich un		for.
			onveyor, Eleva	ator, Hammermill,	, Silo, Bin,	Crusher,	Reactor, Fermenter			
	 		8) Sta	ack Informat	<u>ion</u>	N	I/ A		· · · · · · · · · · · · · · · · · · ·	
Height	Top Ins	side Diameter	Stack	Discharge	Flare	туре	Exit Velocity Gas	of	Exit Temperate Gas	ure of
			☐ Horizo			nclosed		_		
33 ft	10.	.42 ft	⊠ Vertic		\Box			m/s		K
				al with Rain cap						
				9) Flare Fuel	Inform	ation				
Type/Grad Fuel Comb		Maximum Capaci	ity	Heat Conte		Fuel S	pecifications	O	perating Limitation (include units)	
		(include ı	ınıts)			% Sulfi	r. N/A			
Biogas	s	54 MMB	tu/hr	630 Btu/se	cf	% Ash:		I		N/A
Type/Grad Fuel Comb		Maximum Capaci (include ı	ity	Heat Conte		Fuel S	pecifications	O	perating Limitation (include units)	on
			•			% Sulfi	ır:			N/A
	70.1	~	,		•	% Ash:				14/12
1	If the	: flare does/will (combust more	than two fuel type	es, attach a	additional	pages so all fuels a	ire des	scribed.	



		En, LLC			DAT	E: <u>January 201</u>	3
NDEQ Facility II)#: <u>84069</u>			Emission	Point Identification	n#: EP - 9	
Section 7.1:	Comb	ustion Fla	re (cont	inued)			
		1	0) Pilot Fu	el Inform	ation		
Type/Grade of Fuel Combusted	C	mum Fuel apacity ude units)	Heat Co (include		Fuel Specification		Limitation le units)
				,	% Sulfur: % Ash:		□ N/A
If the pilot de	oes/will co	mbust more than	one type of fi	uel, attach a	dditional information	n so all fuels are pr	ovided.
			11) Contro	l Inform	ation		÷ .
Pollutant(s) Contr	rolled	% Control l	Efficiency	Polluta	ant(s) Controlled	% Control F	Efficiency
		. ,					
·							
			,				
•	If ad	ditional pollutar	its are being co	ontrolled, at	tach additional infor	mation.	
,	12) Pot	tential to Em	it Calculati	ons Attac	ched? 🔀 Y	ES	
•	13) Ad	ditional Info	rmation At	tached?	☐ YES	⊠ NO	
Complete the foll	•	NLY if comple		ction as Pa	nrt of an Operatin		ation
Complete the foll	lowing Of	NLY if comple	eting this Sec Actual Flan y of each fuel	re Inform	art of an Operatin nation as been combusted in	g Permit Applic	ation
Complete the foll	lowing Of	NLY if comple	eting this Sec Actual Flan y of each fuel	re Inform type that had	nrt of an Operatin nation as been combusted in Amount Combusted	g Permit Applic	
Complete the foll	lowing Of	NLY if comple	eting this Sec Actual Flan y of each fuel	re Inform type that had	nation Amount Combusted in Vious Five Years	g Permit Applic	
Complete the foll	lowing Of	NLY if comple	eting this Sec Actual Flan y of each fuel	re Inform type that ha Maximum A in the Pre	nation Amount Combusted in Vious Five Years	g Permit Applic the flare. Amount L	ast Year
Complete the foll	lowing Of	NLY if comple	eting this Sec Actual Flan y of each fuel	re Inform type that ha Maximum A in the Pre	nation Amount Combusted in Vious Five Years	g Permit Applic the flare. Amount L	ast Year
	14) Inc	NLY if comple	Actual Flan	re Inform type that ha Maximum A in the Pre Numbe	nation as been combusted in Amount Combusted vious Five Years r Units	g Permit Applic the flare. Amount L	ast Year
Complete the following the fol	14) Inc	NLY if comple	Actual Flan	re Inform type that ha Maximum A in the Pre Numbe	nation as been combusted in Amount Combusted vious Five Years r Units	g Permit Applic the flare. Amount L	ast Year



FACILITY NAN	ЛЕ: <u>AltEn, LLC</u>			DATE	:: <u>January 2013</u>	
NDEQ Facility I	D#: <u>84069</u>		Emission Point	Identification	#: EP - 9	
Section 7.1:	Combustion F	lare (con	tinued)	200-00-00-00-00-00-00-00-00-00-00-00-00-		
-		Actual Pi	lot Information	l		
	16) Indicate the quan	tity of each fu	el type that has been	combusted in the	he flare.	
	Fuel Type		Maximum Amoun in the Previous		Amount Las	st Year
		_	Number	Units	Number	Units
•						
17) Provide the ope	rating hours of this unit fo	or the past five	years (past year if n	new source):		
Year						
Hours Operated						
18)	Actual Emission Ca	lculations A	ttached? 🔲 Y	ES		=
19)	Additional Informat	tion Attach	ed? Y	ES NO		



	F	١.	Cl	I	1	Γ	Y	N	A	M	Œ	:			A	lt	E	n		C																				Ι) A	M	ŀ	٠	J٤	ın	u	ar	y	2(1	3.		MI		i
1	N.	D	E	Q	F	20	eil	lit	y	H)#	•	8	4()6	9											F	'n	1i	SS	i) II	90	ir	ıt	I	de	n	tif	ic	al	tic	n	#:	I	P		1	2							
	H,																	#								Ш																												AM		

Section	7.1:	Combust	ion Fla	re			•	•	*.*.			
IMPORTAN Do NOT use	T: REAL pencil to f	THE INSTRU	CTIONS ACcation. Please	CCOMPANYING type responses or	THIS SI print usin	ECTION : ig black in	BEFORE COMP lk.	LETI ·	ING.	ř (
	;		•	General Info	ormati	on	•					
1) Control E	quipmen	t ID#: EP - 12		2) Install	ation Dat	e:		4.	∏ New	/ Ur	nit
3) Control E	quipmen	t Name/Descri	ption: Load	out Vapor Comb	oustion l	Unit			,	1		
4) Maximun	n Flare R	ated Capacity:	4.8	MMBtu/hr 5	5) Maxin	num Pilo	t Rated Capacity	: N/A		MMB	tu/h	r
6) Operating	g Hours L	imitation (incl	ude units): 8	,760 hours/year						•		
Ċ		,		7) Unit Info	ormati	on			, .			
		List all	the emissio	n units that are co	ontrolled	by the c	ombustion flare:		•			
Unit I	D#	Unit	Type ¹	Unit Na	me		eximum Capacity (include units)	7	Installat	on Date	Ne Ui	ew nit
	r	Los	idout	Truck Lo	adout		-					
											· [<u>]</u>
											<u> </u>	╧
						-					<u> </u>	╬
		- 	 -			<u> </u>				-1 ,	<u> </u>	╬
				this combustion fla							for.	<u></u>
				their own fuel, com ator, Hammermill,							•	
	1) pob c			ack Informati			J/ A	1, 200				
Height	Top Ins	side Diameter		Discharge	*	Туре	Exit Velocity Gas	of	Exit 7	Temperat Gas	ure	of
. 20 ft	1	l ft	☐ Horizo	•	□ E ₁	nclosed pen		m/s		4		K
			9	9) Flare Fuel l	Inform	ation				,		
Type/Grad Fuel Comb		Maximum Capac (include i	ity	Heat Conter (include unit		Fuel S	pecifications			Limitation	on	
Waste G	as	4.8 MMB	stu/hr	850 Btu/sc	f	% Sulfi			•		N/A	1
		Maximum				% Ash:	· ·		. ,	4		
Type/Grad Fuel Comb		Capac (include i	ity	Heat Conter (include unit		Fuel S	pecifications	C		Limitati le units)	on	
						% Sulfi		-			N/A	<u> </u>
. \		flore doco/will	nombust mes	than two fuel type	s attack	% Ash:		ore da	soribad			
	11 (11)	LIAIC GUES/WIII	comoust more	man two ruer type	o, anacil i	additional	pages so all lucis	m v uc	JOUR TOCK.			



		1	re (conti 0) Pilot Fue		ation	
Type/Grade of Fuel Combusted	Ca	num Fuel pacity ide units)	Heat Cor (include t		Fuel Specifications	Operating Limitation (include units)
	•	•			% Sulfur:	
					% Ash:	
If the pilot do	es/will cor	nbust more than	one type of fu	el, attach a	dditional information	so all fuels are provided.
		 	11) Contro	l Inform	ation	
Pollutant(s) Contro	olled	% Control I	Efficiency	Polluta	ant(s) Controlled	% Control Efficiency
				<u> </u>		
		<u> </u>				
						•
	If add	litional pollutan	ts are being co	ntrolled, at	tach additional inform	ation.
	12) Pot	ential to Emi	it Calculatio	ons Attac	ched? 🔀 YE	S
		ditional Info			☐ YES [⊠ NO

			<u> I</u>			
·					,	
15) Provide the ope	rating hours of this un	it for the past five	years (past ye	ar if new source):	,	
Year						
Hours Operated					,	
	1					

Maximum Amount Combusted

in the Previous Five Years

Units

Number

Fuel Type

Amount Last Year

Units

Number



FACILITY NAM	IE: <u>AltEn, LLC</u>			DATE	: <u>January 2013</u>				
NDEQ Facility II	D#: <u>84069</u>		_ Emission Point	Identification	#: EP - 12				
Section 7.1:	Combustion	Flare (con	itinued)		ı				
•		Actual Pi	ilot Information						
	16) Indicate the q	uantity of each fu	el type that has been	combusted in the	ne flare.				
	Fuel Type		Maximum Amoun in the Previous I		Amount Last Year				
ı	- weypę .		Number	Units	Number	Units			
<u></u>				•	·	· · · · · · · · · · · · · · · · · · ·			
17) Provide the ope	rating hours <u>of this un</u>	it for the past five	years (past year if n	ew source):					
Year					• * * * * * * * * * * * * * * * * * * *				
Hours Operated	4 * ·								
18)	Actual Emission	Calculations A	Attached? 🗌 Y	ES					
19)	Additional Inform	nation Attach	ed? Y	ES NO					



FACILITY NAME: Alten, LLC

Air Quality Permit Application Form 7.0: Control Equipment Information

DATE: January 2013

NDEQ Facility	ID#: <u>840</u>	69				E	mission	Point ID#: <u>+</u>	CP - 1			
Section 7.3:	Bagh	ouse (Fa	br	ric Filter)								
IMPORTANT: RI Do NOT use pencil	EAD THE I	INSTRUCTION	NS AC	CCOMPANYING T	THIS S	ECT	TION BEF lack ink.	ORE COMPL	ETING.		,	
				General Info	rmat	ion			_			
1) Control Equipm				2) Insta		Date	e:		New Ur	nit		
3) Control Equipm	nent Name	Description: (Grair	n Unloading Bagh	iouse							
				4) Unit Info				1				
		List all the	e emi	ission units that are	e contr	ollec						
Unit ID#	1	Unit Type		Unit Nam	e			um Capacity ude units)	Insta	allation Date		ew nit
-]	Dump Pit		Grain Receiving		n	2,7	25 bu/hr				
•		Silo		Grain Sil			200	0,000 bu				
-	Gra	in Receiving		Elevator L	æg			-				\Box
				<u> </u>				· ·	<u> </u>			Щ
If more than t	our units' ei	missions are cor		ed by this baghouse,				s so all emission	units are	accounted for.		_
				5) Baghouse In	nform	ıati	ion					
Manufac	turer		Mod	del Name	Mod	del 1	Number	Number		Number of		
					-			Compartm	ents	per Compar	tm	ent
Draft (check one):		1.								<u> </u>		
Induced/Negat		Forced/l	Positi	ive 🗌 (Other:		Describ	e:				
			6) Ba	ag (Fabric Filt	er) In	for	mation	<u> </u>				
Bag (filter) Surfac	e Area (ft ²):	L	ength of Bag (incl	nes):		Di	ameter of Bag	(inches)):		
Air to Bag Ratio:			T	Type of Fabric:		Po	olyester					
Fabric Weight (oz		<u> </u>	F	abric Weave:			Fa	bric Finish:				
Fabric Properties (_		·				
Moisture Bind					Other:	Щ	Descri					
	If you d			ot obtain some of the		orm			nown.			
) St	ack Information		<u> </u>	N/A					
Height	Top Insi	de Diameter		Stack Discharge	<u> </u>		Exit Velo	city of Gas	Exit T	emperature of	G	as
				Horizontal							•	
18.96 ft	2.5	ft	_	Vertical		l	9.314	m/s	•		°K	`
				Vertical with Rair	1 Cap							
-				house Temper		Inf	formati	on	_			
Maximum Design			: A	Ambient °F _] <u>°C</u>	oxdot						
Inlet Temperature		Maximum:		°F 🗌	°C		Minim		°F _] ℃ 🗌		
Outlet Temperatur	e	Maximum:		°F 🗌	°C 🗌]	Minim	um:	°F [□ °C □		



NDEQ Facility ID#: 84069 Emission Point ID#: EP - 1		Z rom	1 7.0. Control Et	4 arpment 1	mormanon	
Section 7.3: Baghouse (Fabric Filter; continued) 9) Baghouse Operational and Monitoring Information Maximum Design Air Flow (acfm): 9,000	FACILITY NAM	IF · AltEn. I.I.C	T		DATE: January 2013	
Section 7.3: Baghouse (Fabric Filter; continued) 9) Baghouse Operational and Monitoring Information	TACINI	L. Allen, LL	280 1181 1181 1181 1181 1181 1181 1181 1		DAIE. Ganuary 2015	
Section 7.3: Baghouse (Fabric Filter; continued) 9) Baghouse Operational and Monitoring Information	NDEO Facility IT)#: 84069		Emissi	on Point ID#: EP - 1	
Simple Bag Collapse Simple Bag Collapse Sonic						
Maximum Design Air Flow (acfm): 9,000 Maximum Operating Gas Exhaust Flow (acfm): Maximum Operating Pressure Drop (inches water): Minimum Operating Dag Operation: Mechanical Bressure Drop (inches water): Minimum Operating Dag Operation: Minimum Operating Dag Operation: Minimum Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operation Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Mours Operated Minimum Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operating Dag Operated Minimum Operating Dag Operated Minimum Operating Dag Operating Dag Operated Minimum Operating Dag Operating Dag Operated Minimum Operating Dag Operating Dag Operated Minimum Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag Operating Dag	Section 7.3:	Baghouse	(Fabric Filter;	ontinued)		
Maximum Operating Pressure Drop (inches water): Maximum Inlet Gas Stream Moisture (%): Maximum Inlet Gas Stream Moisture (%):		9)	Baghouse Operation	al and Monitor	ing Information	
Maximum Operating Pressure Drop (inches water): Maximum Inlet Gas Stream Moisture (%): Maximum Inlet Gas Stream Moisture (%):	Maximum Design A	ir Flow (acfm):	9,000	Maximum Oper	ating Gas Exhaust Flow (acfm):	
Monitoring (check one and give a brief description): Continuous Monitoring:						
Continuous Monitoring: Describe: Visual Monitoring Describe: Visual Monitoring						
Continuous Monitoring: Describe: Visual Monitoring Describe: Visual Monitoring	Monitoring (check o	ne and give a brie	ef description):	•		
Method for Determining When to Clean Bag: Method of Bag Cleaning (check all that apply): Automatic	Continuous Moni	itoring: 🔲 De	escribe:			
Method for Determining When to Clean Bag: Method of Bag Cleaning (check all that apply): Mechanical Shaker Simple Bag Collapse □ Manual Reverse Flow Ring Bag Collapse □ Timed Air Pulse Sonic □ Other Describe: 11) Control Information Uncontrolled Emission Rate (lb/hr): Minimum Size of Particles Collected: Loading Rate (include units): Pollutant: PM/PM10/PM2.5 Capture Efficiency (%): ~99% Pollutant: Capture Efficiency (%): Capture Efficiency (%): Test or Manufacturer's Data Available: Yes ☑ No ☐ 12) Particle Size Distribution If known, enter the particle size distribution: Weight (% of total) Cumulative (%) Size (microns) Weight (% of total) Cumulative (%) Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): <td co<="" td=""><td>Other Monitoring</td><td>g: 🛛 🔀 De</td><td>scribe: Visual Monitorin</td><td>g</td><td>:</td></td>	<td>Other Monitoring</td> <td>g: 🛛 🔀 De</td> <td>scribe: Visual Monitorin</td> <td>g</td> <td>:</td>	Other Monitoring	g: 🛛 🔀 De	scribe: Visual Monitorin	g	:
Method of Bag Cleaning (check all that apply): Automatic	1		10) Baghouse M	aintenance Inf	ormation	
Method of Bag Cleaning (check all that apply): Automatic	Method for Determin	ning When to Cle	ean Bag:			
Automatic Reverse Flow Ring Bag Collapse Timed Describe: Control Information				•	i.	
Manual		П			Simple Bag Collapse	
Timed Describe: Describe:		Ħ		Ħ		
Describe:		H		Ħ		
Uncontrolled Emission Rate (lb/hr): Controlled Emission Rate (lb/hr): Controlled Emission Rate (lb/hr):		Describe:	_	<u> </u>		
Uncontrolled Emission Rate (lb/hr): Minimum Size of Particles Collected: Pollutant: PM/PM10/PM2.5 Pollutant: PM/PM10/PM2.5 Pollutant: Capture Efficiency (%): Pollutant: Capture Efficiency (%): Pollutant: Capture Efficiency (%): Pollutant: Capture Efficiency (%): Test or Manufacturer's Data Available: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacture				rol Informatio	an .	
Minimum Size of Particles Collected: Loading Rate (include units):	Uncontrolled Emissi	on Pate (lh/hr)	,			
Pollutant: PM/PM10/PM2.5 Pollutant: Polluta						
Pollutant: Pollutant: Capture Efficiency (%): Pollutant: Test or Manufacturer's Data Available: Yes No Test or Manufacturer's Data Attached: Yes No Test or						
Pollutant: Test or Manufacturer's Data Available: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No No Test or Manufacturer's Data Attached: Yes No No No No No No No No No No No No No		10/PN12.5	.			
Test or Manufacturer's Data Available: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No No No Test of total No Test or Manufacturer's Data Attached: Yes No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No Test or Manufacturer's Data Attached: Yes No No No Test or Manufacturer's Data Attached: Yes No No No No No No No No No No No No No						
If known, enter the particle size distribution: Size (microns) Weight (% of total) Cumulative (%) 13) Potential to Emit Calculations Attached? YES 14) Additional Information Attached? YES NO Complete the following ONLY if completing this Section as Part of an Operating Permit Application Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Provide the operating hours of this baghouse for the past five years (past year if new unit):		"'s Data Availahl	Vas M No			
If known, enter the particle size distribution: Size (microns) Weight (% of total) Cumulative (%)	1 CSt OI IVIAIIAIAIA	S Data 11 variation		•		
Size (microns) Weight (% of total) Cumulative (%) 13) Potential to Emit Calculations Attached? YES 14) Additional Information Attached? YES NO Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated						
13) Potential to Emit Calculations Attached?	Si	(microns)				
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated		Ze (microns)	W CIGII	It (70 OI IOIAI)	Cumulative (70)	
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated						
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated				,		
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated						
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated		;				
14) Additional Information Attached? Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated	•	13) Potentia	al to Emit Calculation		⊠ VES	
Complete the following ONLY if completing this Section as Part of an Operating Permit Application 15) Actual Operating Information Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated						
Provide the operating hours of this baghouse for the past five years (past year if new unit): Year						
Provide the operating hours of this baghouse for the past five years (past year if new unit): Year Hours Operated	Complete the foll	lowing ONLY i	if completing this Section	on as Part of an	Operating Permit Application	
Year Hours Operated Hours Operated			15) Actual O	perating Inforr	nation	
Year Hours Operated Hours Operated		Provide the or	perating hours of this bagh	ouse for the past fi	ve years (past year if new unit):	
	Year	,				
	Hours Operated			•		
		16) Actual I	Emission Calculation	s Attached?	YES	

17) Additional Information Attached?

☐ NO

] YES



DATE: January 2013

FACILITY NAME: Alten; LLC

NDEQ Facility	ID#: <u>8406</u>	9			Emission	n Point ID#:_I	CP - 2		
Section 7.3:				argumanana.					
			IS ACCOMPANYING T Please type responses or pro-			FORE COMPL	ETING.		•
			General Info	rmatio	on				
1) Control Equipm			2) Instal		ate:		New U		
3) Control Equipm	ient Name/L	Description: S	calper/Day Tank Bag					`	·
	<i>-</i>		4) Unit Info						
		List all the	emission units that are	control					2.7
Unit ID#	· U	nit Type	Unit Name	· ·		num Capacity clude units)	Insta	allation Date	New Unit
-		Scalper	Scalper		_	-			
-		Tank	Day Tank			-	_		$oxed{\sqcup}$
	+				_		+	·	井
If more than f	our units' em	issions are con	trolled by this baghouse, a	ttach ad	Iditional page	es so all emission	units are	accounted for	_Ц_
			5) Baghouse In		-				
Manufac	tura#		Model Name	T .	el Number	Number	of	Number of	Bags
Manurac			Model Name	Mode		Compartm	ents	per Compar	tment
Dungt (about analy								l	
Draft (check one): Induced/Negat		Forced/P	Positive D C	ther:	Descr	ihe:		1.21.	
) Bag (Fabric Filte						
Bag (filter) Surfac	e Area (ft ²):		Length of Bag (inch			Diameter of Bag	(inches)) <u>:</u>	
Air to Bag Ratio:			Type of Fabric:		Polyester			,-	
Fabric Weight (oz):		Fabric Weave:	-	F	abric Finish:			
Fabric Properties (· · · · · · · · · · · · · · · · · · ·						
Moisture Bind				ther:	Desci				
·	If you do		cannot obtain some of the		$\frac{\text{rmation, ple}}{\prod}$ N/A		nown.		
TT-i-h4	Ton Incid	e Diameter	Stack Information	<u></u>			Fi. T		
Height	Top inside	e Diameter	Stack Discharge Horizontal		Exit vei	ocity of Gas	EXIT	emperature of	Gas
40 ft	0.58	ft	Vertical		96.13	6 m/s			°K,
,	_	·	☐ Vertical with Rain						
Mayimum Dasi	Tomesone	<u>′</u> _	Baghouse Tempera	ture I	ntormat	ion			
Maximum Design Inlet Temperature		Maximum:	Ambient °F	°C 🔲	 Minin	num:	°F	°C □	
Outlet Temperature		Maximum:		°C ☐	Minir		°F] ℃ []	
Canot Temperatur		uniiiluiii,		<u>~ ⊔</u>	TATILLI	1141111		<u> </u>	



FACILITY NAMI	E: AltEn, LLC			DATE: Januar	y 2013
NDEQ Facility ID	#: <u>84069</u>		Emissi	on Point ID#: <u>EP - 2</u>	2
Section 7.3: 1	Baghouse (F	abric Filter; c	ontinued)		
		ghouse Operationa		ing Information	
N. D. A.					(f).
Maximum Design Air		5,000		ating Gas Exhaust Flov	
Maximum Operating			Minimum Opera	ting Pressure Drop (in	cnes water)
Maximum Inlet Gas S				•	
Monitoring (check on					•
Continuous Monite			•	·	·
Other Monitoring:	⊠ Descr	ibe: Visual Monitoring			,
		10) Baghouse Ma	intenance Inf	ormation	
Method for Determini				· -	
Method of Bag Clean					P.
Automatic		1echanical Shaker		Simple Bag Collaps	se 🗌
Manual	R	leverse Flow		Ring Bag Collapse	
Timed	A	ir Pulse		Sonic	
Other [Describe:				
	-	11) Cont	rol Informatio	n	
Uncontrolled Emissio	on Rate (lb/hr):	· · · · · · · · · · · · · · · · · · ·	Controlled Emis	sion Rate (lb/hr):	
Minimum Size of Par			Loading Rate (in		· `,
Pollutant: PM/PM10			Capture Efficien		~99%
Pollutant:		····	Capture Efficien	<u> </u>	2276
Pollutant:		* * *	Capture Efficien		\ .
Test or Manufacturer	's Data Available	Yes No 🛛		turer's Data Attached:	Yes No 🗵
· ·			Size Distribut		100 210 23
		If known, enter the		· · · · · · · · · · · · · · · · · · ·	
: :- : : : : : : : : : : : : : : : : :	(
512	e (microns)	weign	t (% of total)	<u> </u>	mulative (%)
r					1
		- · · · · · · · · · · · · · · · · · · 			
			· .		
		- 		•	· · · · · · · · · · · · · · · · · · ·
	12) Dotantial to	o Emit Calculations	s Attachad?	⊠ YES	· · ·
			·· · · · · · · · · · · · · · · · · · ·		NO.
	14) Additional	Information Attac	nea?	☐ YES	⊠ NO
Complete the follo	owing ONLY if c	ompleting this Sectio	n as Part of an	Operating Permit A	Application
		15) Actual Op	erating Inform	nation	1.
	Provide the opera	ating hours of this bagho			ew unit):
Year]		7 (- 3353) 12 12	
Hours Operated		 		· · · · · · · · · · · · · · · · · · ·	•
	16) Actual Em	ission Calculations	Attached?	YES	
		Information Attac		YES	□ NO
•	1/) Auditional	iniormation Attac	neu :	LIES	14 0



Manufacturer

Air Quality Permit Application Form 7.0: Control Equipment Information

FACILITY NAM	IE: AltEn, LLC		DATE: January 2013								
NDEQ Facility II	D#: <u>84069</u>		Emission Point ID#: <u>E</u>	P-3							
Section 7.3:	Baghouse (Fabr	ric Filter)									
	AD THE INSTRUCTIONS A of fill out this application. Pleas			TING.							
		General Information	on	•							
1) Control Equipme	nt ID#: EP - 3	2) Installation I	Date:	New Unit							
3) Control Equipme	ent Name/Description: Ham	mermill Baghouse			-						
		4) Unit Information	on								
	List all the em	ission units that are control	lled by the baghouse:								
Unit ID#	Unit Type	Unit Name	Maximum Capacity (include units)	Installation Date	New Unit						
-	. Hammermill	Hammermill	•								
-	Conveyor	Conveyor	-								
· .	·										
If more than fou	ur units' emissions are controlle	ed by this baghouse, attach ad	ditional pages so all emission	units are accounted for.							
	•	5) Baghouse Informa	ation								

Draft (check one):									
Induced/Nega	tive 🗵	Forced/F	Positive	Other:	Desc	ribe:		-	
		6) Bag (Fabric Fil	ter) Info	ormatic	n ·			
Bag (filter) Surface	e Area (ft²):		Length of Bag (inc	hes):		Diameter of Bag	(inches):		
Air to Bag Ratio:			Type of Fabric:	•	Polyeste	r			
Fabric Weight (oz	z):		Fabric Weave:			Fabric Finish:			
Fabric Properties	(check all that	apply):							
Moisture Bind			al Resistivity	Other:		ribe:			
	If you do no	t have and o	cannot obtain some of th	e bag infor	mation, pl	ease state it as unl	cnown.		
		7) Stack Informat	ion	□ N/	Ά			,
Height	Top Inside D	iameter	Stack Discharg	e	Exit Ve	locity of Gas	Exit Te	mperatur	re of Gas
36 ft	. 1	ft	☐ Horizontal ☑ Vertical ☐ Vertical with Rai	n Cap	21.3	4 m/s			· °K
		8) I	Baghouse Tempei	ature I	nforma	tion			
Maximum Design	Temperature (Capability:	Ambient °F] ℃ [•		
Inlet Temperature	Ma	aximum:	°F □	°C 🗌	Min	mum:	°F _	°C _]
Outlet Temperatur	re Ma	aximum:	°F	°C □	Min	mum:	°F 🗀	°C [
		•	· · · · · · · · · · · · · · · · · · ·				•		

Model Number

Model Name

Number of Bags

per Compartment

Number of

Compartments



FACILITY NAMI	E: <u>AltEn, LLC</u>			DATE: <u>January 2013</u>
NDEQ Facility ID	#: <u>84069</u>		Emiss	sion Point ID#: <u>EP - 3</u>
Section 7.3: 1	Baghouse (l	Fabric Filter; c	ontinued)	
	. 9) Ba	aghouse Operationa	l and Monito	ring Information
Maximum Design Air	r Flow (acfm):	3,300	Maximum Ope	rating Gas Exhaust Flow (acfm):
Maximum Operating		hes water):		rating Pressure Drop (inches water):
Maximum Inlet Gas S	Stream Moisture (%	ó):		
Monitoring (check on		lescription):		
Continuous Monit			***	<u>, , , , , , , , , , , , , , , , , , , </u>
Other Monitoring:	⊠ Desc	ribe: Visual Monitoring	•	
		10) Baghouse Ma	aintenance In	formation
Method for Determin	ing When to Clean	Bag:		
Method of Bag Clean				- A
Automatic -		Mechanical Shaker		Simple Bag Collapse
Manual		Reverse Flow		Ring Bag Collapse
Timed		Air Pulse		Sonic
Other	Describe:		`e. `	
		11) Cont	rol Informati	on
Uncontrolled Emissic	n Rate (lb/hr):	<u>, </u>		ission Rate (lb/hr):
Minimum Size of Par			Loading Rate (
Pollutant: PM/PM1			Capture Efficie	
Pollutant:			Capture Efficie	
Pollutant:	٠,		Capture Efficie	
Test or Manufacturer	's Data Available:	Yes No 🗌		acturer's Data Attached: Yes No 🗌
4.4		12) Particle	Size Distribu	ution
		If known, enter the		
Siz	ze (microns)		t (% of total)	Cumulative (%)
- '	ec (inicions)	" · ·	(70 OI total)	Culturative (70)
		·		
-				
	13) Potential (to Emit Calculations	s Attached?	⊠ YES
,		l Information Attac		☐ YES ⊠ NO
* ,	14) Additiona	I Information Attac	neu:	
Complete the follo	owing ONLY if o	completing this Sectio	n as Part of an	Operating Permit Application
		15) Actual Op	erating Infor	mation
	Provide the oper	rating hours of this bagho	ouse for the past f	five years (past year if new unit):
Year				
Hours Operated	•			
•	16) Actual En	nission Calculations	Attached?	☐ YES
	17) Additiona	l Information Attac	hed?	☐ YES ☐ NO



																																				Ш										
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																																														À
Ì	D	E() F	ac	ili	ty	ID	#	8	4	06	9													1	'n	ai	ssi	O	n I	Po	ir	ıt	II)#	:]	EI	•	6							
																		::::::			11111					Ш,						Ш			ш.											

Section 7.4: Wet Scrubber

Section 7.4.	W CL BCI	ubbei									
IMPORTANT: REAL Do NOT use pencil to the					CTION BEFORE COMI g black ink.	PLETING.					
			Gener	al Information	on		•				
1) Control Equipmen	t ID#: EP - 6		2) In	stallation Date:		New Unit					
3) Control Equipmen	t Name/Descr	ription: Ethanol	l Absorl	ber (CO ₂ Scrub	ber)						
			4) Un	it Informati	on						
	L	ist all emission	units tha	at are controlled	by the wet scrubber:						
Unit ID#	Uni	t Type	ī	Jnit Name	Maximum Capacity (include units)	Installation Date	New Unit				
-	Fern	nenters	Fer	menters (4)	_						
-	Bee	r Well	I	Beer Well	-						
-	T	anks	Lique Propa	lash Tank, 1 efaction Tank, 1 Yeast agation Tank, illage Tanks	-						
· - .	Beer	Stripper		er Stripper			· [-]				
,		on Column	D	oistillation Column	-						
, -	- Molecular Sieves Molecular Sieves (2)										
If more than four uni	ts' emissions a	re controlled by tl	nis wet so	crubber, attach ad	ditional pages so that all en	nission units are accounte	ed for.				
		5) V	Vet Sci	rubber Infor	mation		*				
Manufactur	rer	M	odel Na	me	Model Number	System Type					
		•			Custom						
			6)]	Throat Type							
Fixed	Variable		Not a	pplicable	Throat Dimensions (ur	nits):	, -				
		7) Packing	Tower	Information	ı - Proprietary		-,				
Packing Tower Dime	ensions (units)):		Packing Type	: Pac	cking Size (units):					
Liquid Introduction N	Mechanism Y	es No		Describe:	•						
Mist Eliminator Pres	ent Yes 🗌	No 🗌									
		8) Operat	ional I	nformation -	- Proprietary						
Inlet Air Flow (acfm)					ir Flow (acfm):						
Minimum Pump Disc			·):	Maximu	m Pump Discharge Pres	sure (inches water):					
Describe Pump Disch	narge Pressure	Monitoring:			,						
Additive Liquid Scru											
Percent of Scrubbing					ng Medium Make-up Rat						
Minimum Operating					m Operating Liquid Flor						
Minimum Operating			:	Maximu	m Operating Pressure D	rop (inches water:					
Describe Relative Di		s-Liquid Flow:									
Describe Maintenance	Describe Maintenance:										
					· <u></u>						



			9) M	onitoring		
Equipment:	Flow Gauge(s)	Other:	Describe	e:		
Monitoring:	Continuous 🗵	Non-continuous		Test Port(s) Present:	Yes No	
Describe Mon	itoring:					4
					· · · · · · · · · · · · · · · · · · ·	
FACILITY	NAME: <u>AltEn, LI</u>	C			_ DATE: <u>Jan</u>	uary 2013
NDEQ Faci	lity ID#: <u>84069</u>			Emission	Point ID#: <u>E</u> J	P-6
Section 7	.4: Wet Scru	bber (cont	inue	d)	,	***************************************
			10) C	ontrol Information		, , , , , , , , , , , , , , , , , , ,
Uncontrolled 1	Emission Rate (lb/hr):		•	Controlled Emission R	ate (lb/hr):	VOC – 12.0 lb/hr
Pollutant Forn	n: Gas: 🗵	Particul	ate:	Gas and Partic	culate:	
Pollutant: VO	OC			Capture Efficiency (%)):	100%
Pollutant:				Capture Efficiency (%)):	
Pollutant:	· · · · · · · · · · · · · · · · · · ·	. ,		Capture Efficiency (%)):	• .
Test or Manuf	acturer's Data Availal	ole: Yes 🛛 N	io 🔲	Test or Manufacturer's	Data Attached:	Yes No .
	11) Potent	al to Emit Cal	culati	ons Attached?	XYES -	•
	12) Additio	onal Informati	on At	tached?	YES	⊠ NO
Complete tl	he following ONLY	if completing t	his Sec	ction as Part of an Op	perating Perm	it Application
				Operating Informati		
	Provide the	operating hours of	this ba	ghouse for the past five	years (past.year	if new unit):
Year		,		•		·
Hours Operate	ed					. : [
	14) Actual	Emission Calc	ulatio	ons Attached?	☐ YES	- ;
	15) Additio	onal Informati	on At	tached?	YES	□ NO

EMISSION CALCULATIONS

"Potential to Emit" Emission Estimate:

Alten, LLC, Mead, Nebraska 24.1MM gallons/year Denatured Ethanol

237,965 tons/yr grain 200,325 tons/yr WDGS 8,498,750 bu/yr

Unit ID	Emission Source(s)	PM (tpy)	PM10 (tpy)	PM2.5 (tpy)	SO2 (tpy)	NOx (tpy)	CO (tpy)	VOC (tpy)	H ₂ S (tpy)	HAP (tpy)
EP-1	Grain Unloading Baghouse	2.70	2.70	2.70						
EP-2	Scalper/Day tank Baghouse	1.50	1.50	1.50						
EP-3	Hammermill Baghouse	1.24	1.24	1.24						
EP-4/EP-9	Package Boilers/Digester Flare ¹	3.97	3.97	3.97	98.29	51.22	25.47	2.86	1.07	1.91
EP-5	Fugitive Components							14.33		2.50
EP-6	Ethanol Absorber	8.76	4.38	4.38				52.56		12.92
EP-7	Liquid Storage Tanks							3.83		0.02
EP-8	Truck Loadout							1.21		0.02
EP-10	Wet DGS Storage	0.005	0.001	0.001				0.82		0.04
EP-11	Wet DGS Handling							0.83		
EP-12	Loadout Vapor Combustion Unit	0.160	0.160	0.16	0.013	0.40	1.01	0.12		
EP-13	Cooling Tower	3.80	3.80	3.80						
EP-14	Paved Roads	6.31	1.26	0.31						
EP-15	Auxiliary Boiler	0.15	0.15	0.15	0.01	2.00	1.68	0.11		0.04
EP-16	Fugitives (grain)	0.64	0.32	0.28						
	Totals, Plantwide	29.24	19.48	18.49	98.31	53.62	28.15	76.66	1.07	17.44

Notes:

Emissions are conservative and are considered worst case for permitting purposes

Emergency fire water pump engine is an electric, not diesel engine, therefore not included in PTE

PM/PM10/PM2.5 emissions based on minimum efficiency of collection system, includes uncaptured fugitives

Fugitive Components do not include distillation components operating under negative pressure

Trucks assumed carrying gasoline (worst case) prior to taking on load of denatured etoh

Truck Loadout VOCs controlled by 85.5% efficient vapor recovery unit

Wet Cake VOC and HAP emissions are based on engineering estimate as well as NDEQ factsheet emission factors.

¹Worst of 2 scenarios is used for established PTE for biogas/natural gas combustion

Total GHG Emissions from Combustion Sources

Boilers and Flares

TOTAL GHG	Emissions
GHG	Potential Emissions (tons/yr)
CO ₂	65,692.69
CH₄	2.50
N ₂ O	0.44
GHGs (mass basis)	65,695.61
CO ₂ e	65,877.17

Hazardous Air Pollutant Emissions Summary

See Workbook for details of emission calculations

	WDGS Storage &	Ethanol	Package	Aux.	Fugitive	Product	Truck	
Compound	Handling	Absorber	Boilers	Boiler	losses	Storage	loading	TOTAL
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Acrolein	0.0017	1.752			0.064	0.0004	0.0002	1.82
Formaldehyde	0.0222	1.7520	0.0334	0.0015	0.0024	0.0004	0.0002	1.81
Acetaldehyde	0.0111	7.6650			2.2212	0.0007	0.0003	9.90
Methanol	0.0044	1.7520			0.2150	0.0007	0.0003	1.97
Hexane	1		0.8007	0.0353		0.0111	0.0047	0.85
Toluene			0.0015	0.0001		0.0011	0.0014	0.00
Benzene			0.0009	0.0000		0.0006	0.0024	0.00
Nickel			0.0009	0.0000				0.0010
Chromium			0.0006	0.0000				0.0007
Dichlorobenzene			0.0005	0.0000				0.0006
Cadmium			0.0005	0.0000				0.0005
Naphthalene			0.0003	0.0000			0.0000	0.0003
Manganese			0.0002	0.0000				0.0002
Mercury			0.0001	0.0000				0.0001
Arsenic			0.0001	0.0000				0.0001
Cobalt			0.0000	0.0000				0.0000
2-Methylnaphthalene			0.000011	0.0000				0.00001
Phenanthrene			0.000008	0.0000				0.00000
Pyrene			0.000002	0.0000				0.00000
Fluoranthene			0.000001	0.0000				0.00000
Fluorene			0.000001	0.0000				0.00000
Xylenes						0.0001	0.0031	0.0032
Cumene						0.0000		0.0000
Ethylbenzene						0.00001		0.0000
Carbon disulfide						0.00000		0.00000
Trimethylbenzene							0.0033	0.00330
Cyclohexane							0.00002	0.00002
Hydrogen Sulfide			1.0696					1.06960
Totals	0.0395	12.921	1.909	0.037	2.503	0.015	0.0158	

Total Potential to Emit 17.44

Grain Handling Emissions:

Basis:

24.1 MM gallons/year Denatured Ethanol

** Grain Handling/Storage is closed system

Emissions based on AP-42 Particulate Emission Factors for Grain Elevators

PM/PM-10/PM-2.5 Emissions:

ID	Emission Source	Baghouse Aiflow (acfm)	Emission Factor (gr/scf)	Hours of Operation (hrs/yr)	Controlled PM/PM-10/ PM-2.5 Emissions (lbs/hr)	Controlled PM/PM-10/ PM-2.5 Emissions (tons/yr)
EP-1	Grain Receiving Baghouse	9,000	0.008	8,760	0.62	2.70
EP-2	Scalper/Day tank Baghouse	5,000	0.008	8,760	0.34	1.50
EP-3	Hammermill Baghouse	3,300	0.01	8,760	0.28	1.24

Total 5.44

Grain Handling Fugitive Emissions:

PM Emissions:

ID	Emission Source	Throughput (tpy)	Emission Factor (lb/ton)	Potential uncontrolled PM (tpy)	Controlled PN Emissions (tons/yr)
NA	Fugitives Receiving	237,965	0.035	4.16	0.208
NA	Fugitives Handling/Stor.	237,965	0.061	7.26	0.363
NA	Fugitives Grain Scalping	237,965	0.012	1.43	0.071

Total 0.643

PM-10 Emissions:

ID	Emission Source	Throughput (tpy)	Emission Factor (lb/ton)	Potential uncontrolled PM-10 (tpy)	10 Emissions (tons/yr)
NA	Fugitives Receiving	237,965	0.0078	0.93	0.046
NA	Fugitives Handling/Stor.	237,965	0.034	4.05	0.202
NA	Fugitives Grain Scalping	237,965	0.012	1.43	0.071

Total 0.320

PM-2.5 Emissions:

ID	Emission Source	Throughput (tpy)	Emission Factor (lb/ton)	uncontrolled	Controlled PN 2.5 Emissions (tons/yr)
NA	Fugitives Receiving	237,965	0.0013	0.15	0.008
NA	Fugitives Handling/Stor.	237,965	0.034	4.05	0.202
NA	Fugitives Grain Scalping	237,965	0.012	1.43	0.071

Total 0.281

Notes:

- 1. Fugitives are a result of uncaptured PM/PM10/PM2.5
- 2. Assumes ethanol plant will receive and store grain in their grain storage silos
- 3. Assumes additional control of fugitives by choked flow system
- 4. Calculations assume a 95% reduction in fugitives due to choked flow, equipment, and enclosures

Emissions from Cooling Tower:

Basis:

Mass balance based on circulation rates, TDS, Drift Loss

Water density 8.34 lb/gal

Based on manufacturer's guarantee of 0.005% drift loss All PM is assumed to be PM10, therefore PM = PM10

Cooling tower is based on two cells

Emission Source	Circulation rate (gal/hr)	TDS content (avg ppm)	Drift Loss (percent)	Operating hours (hrs/yr)	PM PTE (tons/yr)	PM10 PTE (tons/yr)	PM2.5 PTE (tons/yr)
Cooling Tower	866,640	2400	0.005	8760	3.80	3.80	3.80

Note: any increase in average TDS beyond 2400 ppm will result in increased PM/PM10/PM2.5 emissions.

Emissions from combustion of natural gas at package boiler

Basis: SO2 factor based on AP-42 emission factor; NOx factor based on AP-42 w/possible burner.

Unit assumed to operate maximum fuel input capacity

Assumed operation time:

BTU content of bio gas: BTU content of natural gas:

630 Btu/scf 1020 Btu/scf

Capacity: Boiler 1 54.00 MMBtu/hr Boiler 2 49.59 MMBtu/hr

66 MMBtu/hr

Boiler combined will be limited to:

Boilers will be limited to 578,160 MMBtu/year

Scenario 1 - 100% Natural Gas Combusted in Boilers, 100% Biogas Combusted in Flare

Boilers Emissions

Pollutant	Heat Input (MMBtu/hr)	E Factors lb/MMBtu	Factor Source	PTE lb/hr	PTE tpy
NOx	66.00	0.097	Vendor	6.40	28.04
502	66.00	0.006	Vendor	0.40	1.73
СО	66.00	0.021	Vendor	1.39	6.07
VOC	66.00	0.0054	AP-42, Table 1.4-2	0.36	1.56
PM	66.00	0.0075	AP-42, Table 1.4-2	0.50	2.17
PM10	66.00	0.0075	AP-42, Table 1.4-2	0.50	2.17
PM2.5	66.00	0.0075	AP-42, Table 1.4-3	0.50	2.17
H2S	66.00	[898]			

Anaerobic Digester Flare Emissions

Pollutant	Heat Input (MMBtu/hr)	E Factors lb/MMBtu	Factor Source	PTE lb/hr	PTE tpy
NOx	54	0.098	AP-42, Table 1.4-2	5.29	23.18
SO2	54	0.34	Chemical Process 2000, Inc.	18.36	80.42
СО	54	0.082	AP-42, Table 13.5-1	4.43	19.39
VOC	54	0.0055	AP-42, Table 1.4-2	0.30	1.30
PM	54	0.0076	AP-42, Table 1.4-2	0.41	1.80
PM10	54	0.0076	AP-42, Table 1.4-2	0.41	1.80
PM2.5	54	0.0076	AP-42, Table 1.4-2	0.41	1.80
H2S	54	0.0037	Chemical Process 2000, Inc.	0.20	0.88

Total Emissions from Scenario 1

Pollutant	PTE lb/hr	PTE tpy
NOx	11.69	51.22
502	18.76	82.15
СО	5.81	25.47
VOC	0.65	2.86
PM	0.91	3.97
PM10	0.91	3.97
PM2.5	0.91	3.97
H2S	0.20	0.88

Scenario 2 - 100% Biogas Combusted in Boilers, Flare not operating

oilers Emissions

Pollutant	Heat Input (MMBtu/hr)	E Factors lb/MMBtu	Factor Source	PTE lb/hr	PTE tpy
NOx	66.00	0.011	Vendor	0.73	3.18
502	66.00	0.34	Chemical Process 2000, inc	22.44	98.29
со	66.00	0.021	Vendor	1.39	6.07
VOC	66.00	0.0054	AP-42, Table 1.4-2	0.36	1.56
PM	66.00	0.0075	AP-42, Table 1.4-2	0.50	2.17
PM10	66.00	0.0075	AP-42, Table 1.4-2	0.50	2.17
PM2.5	66.00	0.0075	AP-42, Table 1.4-2	0.50	2.17
H2S	66.00	0.0037	Chemical Process 2000, inc	0.24	1.07

WORST CASE EMISSIONS

used for potential to emit

Pollutant	PTE lb/hr	PTE tpy	Scenario?
NOx	11.69	51.22	Scenario 1
502	22.44	98.29	Scenario 2
СО	5.81	25.47	Scenario 1
VOC	0.65	2.86	Scenario 1
PM	0.91	3.97	Scenario 1
PM10	0.91	3.97	Scenario 1
PM2.5	0.91	3.97	Scenario 1
H2S	0.24	1.07	Scenario 2

Package Boilers Natural Gas Combustion HAPS:

Basis: Emission factors taken from AP-42, Table 1.4-3 and 1.4-4 (7/98)

Only factors for pollutants noted as HAPs as defined by Section 112(b) of the Clean Air Act listed Factors marked as "less than" are omitted as emissions are considered negligible

Butane, ethane, propane and pentane are assumed to be combusted in the TO and assumed negl.

The following metals are not listed as HAPs; barium, copper, molybdenum, vanadium, zinc

*Boiler heat input will be limited to 66 MMBtu/hr or 578,160 MMBtu/year; therefore, using maximum heat input of 103.59 MMBtu/hr to demonstrate worst-case HAP emissions.

					PTE
1		Emission Factor	Amount Per	Emissions	Emissions
Units	Organic Compound	(lb/million ft3)	Year (MM scf)	(lb/yr)	(tpy)
	Hexane	1.8	890	1601.38	0.8007
See Below	Formaldehyde	7.50E-02		66.72	0.0334
1	Toluene	3.40E-03		3.02	0.0015
1	Benzene	2.10E-03		1.87	0.0009
1	Nickel	2.10E-03		1.87	0.0009
1	Chromium	1.40E-03		1.25	0.0006
1	Dichlorobenzene	1.20E-03		1.07	0.0005
1	Cadmium	1.10E-03		0.98	0.0005
1	Naphthalene	6.10E-04		0.54	0.0003
1	Manganese	3.80E-04		0.34	0.0002
	Mercury	2.60E-04		0.23	0.0001
1	Arsenic	2.00E-04		0.18	0.0001
	Cobalt	8.40E-05		0.07	0.0000
	2-Methylnaphthalene	2.40E-05		0.02	0.0000
	Phenanthrene	1.70E-05		0.02	0.0000
1	Pyrene	5.00E-06		0.00	0.0000
1	Fluoranthene	3.00E-06		0.00	0.0000
1	Fluorene	2.80E-06		0.00	0.0000
			Totals:	1,679.57	0.840

Boiler Natural Gas Combustion:

	103.59 MMBtu/hr	8.760 hr/vr
Boiler 2	49.59 MMBtu/hr	8,760 hr/yr
Boiler 1	54.00 MMBtu/hr	8,760 hr/yr

103.59 MMBtu/hr, maximum potential 1,020 BTU/scf 101,558.82 scf/hr, maximum potential 890 MMscf/yr

GHG Emissions from Boilers and Flares

Scenario 1: 100% Natural Gas combusted at Boilers, 100% Biogas Combusted at Flare

Package Boilers

Heat Input Needed:

66.00 MMBtu/hr

(NG Combustion)

Operating hours: Conversion Factor 8,760.00 hrs/yr 2.20462 lbs/kg

Boilers 100% NG Combustion						
Pollutant	Emission Factor (kg/MMBtu) ¹	Emission Factor (lbs/MMBtu) ²	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/year)		
GHGs						
CO ₂	53.020	116.89	7,714.67	33,790		
CH ₄	0.0010	0.0022	0.15	0.64		
N ₂ O	0.00010	0.00022	0.01	0.06		
GHGs (MB)	53.021	116.891	7,714.831	33,790.96		
CO₂e				33,823.40		

Anaerobic Digester Flare

Heat Input Needed:

54 MMBtu/hr

6,199.362

(Methane Combustion)

27,153.21

27,288.09

Operating hours: Conversion Factor 8,760.00 hrs/yr 2.20462 lbs/kg

Biogas Combusted in Anaerobic Digester Flare **Potential Potential Emission Factor Emission Factor** Hourly Annual **Pollutant Emissions Emissions** (kg/ MMBtu)1 (lbs/ MMBtu)² (lbs/hr) (tons/yr) GHGs CO2 52.070 114.795 6,198.91 27,151.21 1.6686 CH₄ 0.0032 0.007 0.38 N₂O 0.00063 0.001 0.08 0.3285

114.803

NOTES:

CO₂e

52.074

Total GHG Emissions from Scenario 1

GHGs (mass basis)

Pollutant	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/yr)
GHGs		
CO ₂	13,913.58	60,941.47
CH ₄	0.53	2.3059
N ₂ O	0.09	0.3922
GHGs (mass basis)	13,914.19	60,944.17
CO ₂ e		61,111.49

¹GHG Emissions are based on 40 CFR 98, Tables A-1, C-1 and C-2

²Conversions from Table A-2 to Subpart A of Part 98 - Units of Measure Conversion

GHG Emissions from Boilers and Flares (cont.)

Scenario 2: 100% Biogas combusted at Boilers, Flare not operated

Package Boilers

Heat Input Needed:

66.00 MMBtu/hr

(NG Combustion)

Operating hours: Conversion Factor 8,760.00 hrs/yr 2.20462 lbs/kg

Boilers 100% NG Combustion							
Pollutant	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/year)					
GHGs							
CO ₂	52.070	114.79	7,576.44	33,185			
CH₄	0.0032	0.0071	0.47	2.04			
N ₂ O	0.00063	0.00139	0.09	0.40			
GHGs (MB)	52.074	114.803	7,576.998	33,187.25			
CO ₂ e				33,352.11			

WORST CASE EMISSIONS

- used for potential to emit calculations

Pollutant	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/yr)
GHGs		
CO ₂	13,913.58	60,941.47
CH ₄	0.53	2.3059
N ₂ O	0.09	0.4015
GHGs (mass basis)	13,914.19	60,944.17
CO₂e		61,111.49

Auxiliary Boiler Criteria Pollutant Emissions

Unit:

Package Boiler

Fuel:

Natural Gas

Size:

20.0 2000 MMBtu/hr

Hours per year

hours

Pollutant	E Factors lb/MMBtu	PTE lb/hr	PTE tpy
NOx	0.1	2.00	2.00
SO2	0.0006	0.01	0.01
СО	0.084	1.68	1.68
VOC	0.0055	0.11	0.11
PM/PM10/PM2.5	0.0075	0.15	0.15

Auxiliary Boiler Natural Gas Combustion HAPS:

Basis: Emission factors taken from AP-42, Table 1.4-3 and 1.4-4 (7/98)

Only factors for pollutants noted as HAPs as defined by Section 112(b) of the Clean Air Act listed

Factors marked as "less than" are omitted as emissions are considered negligible

Butane, ethane, propane and pentane are assumed to be combusted in the TO and assumed negl.

The following metals are not listed as HAPs; barium, copper, molybdenum, vanadium, zinc

Boiler can only operate to a total of 66MM BTU/hr, therefore this is overestimating emissions based on boiler capacity.

					PTE
		Emission Factor	Amount Per	Emissions	Emissions
Units	Organic Compound	(lb/million ft3)	Year (MM scf)	(lb/yr)	(tpy)
	Hexane	1.8	39	70.59	0.0353
See Below	Formaldehyde	7.50E-02		2.94	0.0015
1	Toluene	3.40E-03		0.13	0.0001
1	Benzene	2.10E-03		0.08	0.0000
1	Nickel	2.10E-03		0.08	0.0000
1	Chromium	1.40E-03		0.05	0.0000
1	Dichlorobenzene	1.20E-03		0.05	0.0000
	Cadmium	1.10E-03		0.04	0.0000
	Naphthalene	6.10E-04		0.02	0.0000
1	Manganese	3.80E-04		0.01	0.0000
1	Mercury	2.60E-04		0.01	0.0000
1	Arsenic	2.00E-04		0.01	0.0000
	Cobalt	8.40E-05		0.00	0.0000
	2-Methylnaphthalene	2.40E-05		0.00	0.0000
	Phenanthrene	1.70E-05		0.00	0.0000
	Pyrene	5.00E-06		0.00	0.0000
	Fluoranthene	3.00E-06		0.00	0.0000
	Fluorene	2.80E-06		0.00	0.0000
			Totals:	74.03	0.037

Boiler Natural Gas Combustion:

Boiler 2

20 MMBtu/hr

2,000 hr/yr

SUM

20 MMBtu/hr, maximum potential

1,020 BTU/scf

19,607.84 scf/hr, maximum potential

39 MMscf/yr

GHG Emissions from Auxiliary Boiler

Heat Input Needed:

20 MMBtu/hr

(NG Combustion)

Operating hours:

2,000.00 hrs/yr

Conversion Factor 2.20462 lbs/kg

Boiler NG Combustion						
Pollutant	Emission Factor (kg/MMBtu) ¹	Emission Factor (Ibs/MMBtu) ²	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/year)		
GHGs						
CO ₂	53.020	116.89	2,337.78	2,337.78		
CH₄	0.0010	0.0022	0.04	0.04		
N ₂ O	0.00010	0.00022	0.004	0.004		
GHGs (MB)	53.021	116.891	2,337.828	2,337.83		
CO₂e				2,340.07		

NOTES:

¹GHG Emissions are based on 40 CFR 98, Tables A-1, C-1 and C-2

²Conversions from Table A-2 to Subpart A of Part 98 - Units of Measure Conversion

Firewater Pump - Emergency Equipment (EP-15)

Basis: Manufacturer's emission factors:

275 hp diesel

Emission Factor for PM10 assumed to be all PM emissions Equipment for Emergency Purposes, maximum of non-emergency

500 hours/year assumed as maximum operation of emergency equipment.

Emission Factors based on AP-42, Section 3.3

REMOVE FROM PERMIT Unit is Electric, Not Diesel

Unit Description:

Fire Water Pump

Unit Size:

275 hp

Pollutant	E Factors lb/hp-hr	PTE lb/yr	PTE tpy
NOx	0.0310	4262.50	0.00
SO2	0.0021	288.75	0.00
СО	0.0067	921.25	0.00
VOC*	0.0025	343.75	0.00
PM/PM-10	0.0022	302.50	0.00

Ethanol Absorption (EP-6):

Basis:

Estimate and emission factors based on emission test data

Denatured Ethanol Production:

24.10 MM gal/yr

Assumed operation time:

8760 hr/yr

VOC/HAP Emissions: assumes that all ethanol production is scrubbed

Emission Source	Pollutant Type	Pollutant	Production (MMgpy)	Emission factor (lb/hr)	Controlled Emissions (tons/yr)
		VOC	24.10	12.00	52.56
	Criteria	PM	24.10	1.00	4.38
		PM10/PM2.5	24.10	1.00	4.38
		PM+PM10			8.76
Fermentation Scrubber	HAPs	Acetaldehyde	24.10	1.75	7.67
		Acrolein	24.10	0.4	1.75
		Methanol	24.10	0.4	1.75
		Formaldehyde	24.10	0.4	1.75
	Total HAPs			2.95	12.92

Emission factors are based on earlier applications for this source and NDEQ Fact Sheet
It is anticipated that the facility will pass with these emissions, as maintenance on the unit has occurred since the previous stack testing.

Emissions only increased slightly to allow for conservatism and cushion PM/PM10 Emissions are included for conservatism, as these emissions were not accounted for in previous applications.

AltEn, LLC Facility ID: 84069 Potential To Emit Calculations

Paved Roads - in plant only:

Basis:

100% of grain, WDGS, ethanol, denaturant goes in/out by truck

Grain density = 56 lb/bushel

Trip miles based site layout, and worst case mileage.

Equation based on AP-42 Section 13.2.1 Paved Roads

lbs/VMT Equation: E=k (sL)^{0.91} (W)^{1.02}

k PM

0.011 dimensionless

particle size multiplier

k_{PM-10}

0.0022 dimensionless

k_{PM-2.5}

0.00054 dimensionless

Percent of Total

53.9%

46.1%

road surface silt loading

sL

3 g/m2

Emission Unit	Truck Full (tons)	Truck Empty (tons)	Average Truck (tons)	PM Emission Factor (lb/VMT)	PM 10 Emission Factor (lb/VMT)	PM 2.5 Emission Factor (lb/VMT)	Total VMT	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)	PM2.5 Emissions (tons/yr)
In plant paved roads	40.00	15.00	28.47	0.91	0.18	0.04	13,878	6.31	1.26	0.31

VMT Calculations

			% out by			Full	Empty
Product	Load Size	Amount/yr	truck	# of Trips	VMT (miles)	(mi)	(mi)
Denaturant	7500 gal	723,000 gal	100%	96	82	44	38
Denatured Ethanol	7500 gal	24,100,000 gal	100%	3,213	2,860	1,487	1,373
Grain	25 tons	237,965 tons	100%	9,519	7,329	4,104	3,225
Wet DGS	25 tons	111,325 tons	100%	4,453	3,607	1,840	1,767
		-		Total	13,878	7,475	6,403

Weighted Vehicle Average

((Empty %)*(15)) + ((Full %)*(40))

Empty Vehicle

15 Tons 40 tons

Full Vehicle

28.47 tons

Equipment Leaks from Fugitive Components

Basis: Leak Rate (SOCMI average) multiplied by no. of components

Component counts based on previous application and facility component count

Leak Rates and VOC control from: Protocol for Leak Emission

Rates EPA-453/R-95-017, November 1995

Equipment	#	Leak Rate (kg/hr/source)	VOC lb/hr	VOC tpy	LDAR Control percent	VOC tpy
Light Liquid Valves	360	0.00403	3.20	14.00	84.00	2.24
Light Liquid Pumps	25	0.0199	1.10	4.80	69.00	1.49
Gas Valves	30	0.00597	0.39	1.73	87.00	0.22
Pressure Relief Valves	7	0.104	1.60	7.02	0.00	7.02
Open Pipes	35	0.0017	0.13	0.57	0.00	0.57
Sample Connections	12	0.015	0.40	1.74	0.00	1.74
Flanges (connectors)	455	0.00183	1.83	8.03	87.00	1.04
Total Fugitive Components	924	VOC	Uncontrolled	37.89	Controlled	14.33

Notes:

Components in vacuum service are not inventoried and not to be inspected due to leak free nature Components with >20% VOC by volume or >10% by weight will be part of the LDAR program Except for valves and pumps, non-welded components and fiitings treated as "flanges" for LDAR

HAP portion of VOCs:

Pollutant	Mass Fraction	VOC (tpy)	HAP (tpy)	
Formaldehyde	0.000169	14.33	0.002	
Acetaldehyde	0.155	14.33	2.221	
Methanol	0.015	14.33	0.215	
Acrolein	0.0045	14.33	0.064	

Total 2.503

ICM HAP fraction derived from stack testing of Fermentation Scrubber

Wet DGS Store/Handling

Basis:

100% of Wet DGS is moved to truck by front end loader

Front end loader average weight = 2 tons

1 Front end loader trip = 10 feet

Emission Unit	Front end loader (tons)	Front end loader empty (tons)	Average Truck (tons)	PM Emission Factor (lb/VMT)	PM10/PM2.5 Emission Factor (lb/VMT)	Total VMT	PM Emissions (tons/yr)	PM10/PM2.5 Emissions (tons/yr)
In plant								
paved								
roads	3.00	1.00	2.00	0.055	0.011	190	0.005	0.001

VMT Calculations	Load Size	Amount/yr	# of Trips	VMT (miles)	

2

200,325 tons

100,163

190

Wet DGS (EP-11)

Based on Handheld VOC monitor results of 0.1 to 7.0 ppm VOC, assume VOC emissions as insignificant Emission factor increased by factor of 10 in order to be conservative

	VOC
VOC emission factor (lb/ton)	
0.0083	0.83

Wet Cake pile (EP-10)

Emission factor derived from NDEQ fact sheet and previous application package

VOC emission factor (lb/day)	VOC emissions (tons/year)
4.47	0.82

TOTAL VOC from wetcake Handling and storage	1.65
---	------

HAP portion of VOCs:

Emission factors taken from Contruction Permit fact sheet

	Emission Factor (lb/ton)	HAP (tpy)
Formaldehyde	0.000222	0.02224
Acetaldehyde	0.000111	0.01112
Methanol	0.0000444	0.00445
Acrolein	0.0000167	0.00167
	Total	0.03947

Storage Tanks VOCs and HAPs:

Basis: Tanks 4.09 software (VOC), see attached tank calculations.

Notes:

Denatured Ethanol emission based on 97% being ethanol, 3% being denaturant

Tank	Stored	voc	voc	Acetaldehyde	Methanol	Formaldhyde	Acrolein	Benzene	Hexane	Toluene	Xylene	Cumene	Ethylbenzene	Carbon disulfide
ID	Liquid	(lb/yr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
TK-801A	Anhydrous Ethanol	1,398.50	0.70	1.40E-04	1.40E-04	6.99E-05	6.99E-05							
TK-801B	Anhydrous Ethanol	1,398.50	0.70	1.40E-04	1.40E-04	6.99E-05	6.99E-05	_						
TK-803	Off-Spec Ethanol	2,428.02	1.21	2.43E-04	2.43E-04	1.21E-04	1.21E-04							
TK-810	Denatured Ethanol	384.35	1.02	1.99E-04	1.99E-04	9.93E-05	9.93E-05	7.68E-05	1.54E-03	1.54E-04	1.54E-05	3.07E-06	1.54E-06	6.14E-07
TK-808	Denaturant	2,047.58	0.19					4.80E-04	9.61E-03	9.61E-04	9.61E-05	1.92E-05	9.61E-06	3.84E-06
		Total VOCs	3.828											
		Total HAPs	0.015	7.21E-04	7.21E-04	3.61E-04	3.61E-04	5.57E-04	1.11E-02	1.11E-03	1.11E-04	2.23E-05	1.11E-05	4.46E-06

HAP:	Mass Fractions (VOL specific)
	(% / 100)
Acetaldehyde	0.0002 etoh (anhydrous/denatured etoh)
Methanol	0.0002 etoh (anhydrous/denatured etoh)
Formaldehyde	0.0001 etoh (anhydrous/denatured etoh)
Acrolein	0.0001 etoh (anhydrous/denatured etoh)
Hexane (ng)	0.05 denaturant, natural gasoline
Toluene	0.005 denaturant, natural gasoline
Benzene (ng)	0.0025 denaturant, natural gasoline
Xylenes	0.0005 denaturant, natural gasoline
Cumene	0.0001 denaturant, natural gasoline
Ethylbenzene	0.00005 denaturant, natural gasoline
Carbon	
disulfide	0.00002 denaturant, natural gasoline

HAP calculations (tpy) based on VOL (tpy) x HAP Mass Fraction

Loading Flare (Vapor Combustion Unit) (EP-12):

PM/PM-10/PM2.5 is negligible based on smokeless design

Natural Gas combustion only

Unit remains in standby mofe with no pilot flame

Unit has automatic start-up and ignition of pilot, initiated by an electrical

signal from the loading rack.

Rate

4.8 MMBtu/hr

Heating Value

850 Btu/scf

Operating time

8760 hr/yr

24,100,000 gallons loaded per year

Emission	NOx	4 mg/l	vendor data, previous application
Factors	CO	10 mg/l	vendor data, previous application
	VOC	0.0055 lb/MMBt	u (AP-42, Table 1.4-2)
	PM/PM10/PM2.5	0.0076	(AP-42, Table 1.4-2)
	SO2	0.0006	(AP-42, Table 1.4-2)
	HAP	negligible	(AP-42, Table 1.4-2)
Flaring Emissions	NOx	805 lb/year	0.40 ton/yr
	CO	2013 lb/year	1.01 ton/yr
	VOC	0.026 lb/hr	0.12 ton/yr
	PM/PM10/PM2.5	0.036 lb/hr	0.16 ton/yr
	SO2	0.003 lb/hr	0.01 ton/yr

negligible

GHG Emissions from the Loadout Flare

HAP

Flare Design Rate:

4.8 MMBtu/hr (Methane/VOC Combustion)

negligible

Operating hours:

8,760 hrs/yr

Conversion Factor

2.20462 lbs/kg

Loadout Flare - Methane/VOC Emissions					
Pollutant	Emission Factor (kg/MMBtu) ¹	Emission Factor (lbs/MMBtu) ²	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (tons/yr)	
GHGs					
CO ₂	52.070	114.795	551.01	2,413.44	
CH ₄	0.0032	0.007	0.03386	0.1483	
N ₂ O	0.00063	0.001	0.00667	0.0292	
GHGs (MB)	52.074	114.803	551.054	2,413.618	
CO₂e				2,425.61	

VOC emissions from Product Loading (Truck)

Basis:

Assumes tanker trucks previously contained conventional gasoline and

gasoline vapors are displaced as the denatured ethanol is loaded

Vapor Control system overall effeciency of 85.5%

(90% capture, 95% destruction)

Denatured Ethanol

Loading Operations	Basis:	Calculated from AP-42, Section 5.2.2 - Loading Losses					
		Equation:	Equation: 12.46*S*P*M/T				
		where:	S	1	Saturation factor (submerged)		
From Tanks 4.09			Р	0.5652	Vapor pressure (psia)		
			M	49.9431	Molar Mass (lb/lb-mole)		
			Т	508.12	Product Temp (deg R)		
		AP-42 Fact	or:	0.69	lb/1000 gal		

Losses calculated using this factor multiplied by loading rates:

Denatured Ethanol Loaded Out:

24,100,000 gal/yr

VOC Loading losses

16,682 lb/yr,uncontrolled

Controlled by vapor combustion unit

1.21 tpy, @ 85.5%

Denaturant

Denaturant					
Loading Operations	Basis:	Calculated from AP-42, Section 5.2.2 - Loading Losses			
		Equation:	Equation: 12.46*S*P*M/T		
		where:	S	1 Saturation factor (submerged)	
From Tanks 4.09			P	4.2771 Vapor pressure (psia)	
			M	66 Molar Mass (lb/lb-mole)	
			T	508.12 Product Temp (deg R)	
		AP-42 Fact	tor:	6.92 lb/1000 gal	
Losses calculated using this fac	tor multiplie	ed by loading	rates:		
Denaturant loaded for storage:				723,000 gal/yr	
VOC Loading losses				5,005 lb/yr,uncontrolled	
Controlled by vapor combustio	n unit			0.36 tpy, @ 85.5%	

Total Loading Emissions (tpy): 1.57

Truck and Rail Loading HAP Losses:

Truck	Loading	HAPS:
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Composition based on typical MSDS for unleaded gasoline (mid points used)

Most gasoline is similar in composition

Only listed HAPs are given below

Calculations assume that trucks carrying ethanol were carrying gasoline and these vapors are vented to flare during loading

Based on 97% ethanol, and 3% denaturant

Truck Lo	pading	HAPS:
----------	--------	-------

VOC from denatured ethanol loading:	1.57 tpy
	1.53 tpy, Ethanol portion
	0.05 tpy, denaturant portion

Compound	Percent	VOC	HAP	
	in Product	Emissions	Emissions	
		(tpy)	(tpy)	
Benzene*	5.00%	0.05	0.002	
Hexane*	10.00%	0.05	0.005	
Toluene*	3.00%	0.05	0.001	
Xylene*	6.50%	0.05	0.003	
Trimethylbenzene*	7.00%	0.05	0.003	
Naphthalene*	0.02%	0.05	0.00001	
Cyclohexane*	0.05%	0.05	0.00002	
Acetaldehyde**	0.0002	1.53	0.0003	
Methanol**	0.0002	1.53	0.0003	
Acrolein**	0.0001	1.53	0.0002	
Formaldehyde**	0.0001	1.53	0.0002	
Total HAPs		31.61 lb/yr		
	0.0158 ton/yr			

^{*} Common constituent of gasoline, used for worst-case scenario

^{**} Based on Engineer Estimates.

TANKS DATA

TANKS 4.0.9d

Emissions Report - Summary Format Tank Indentification and Physical Characteristics

Identification

User Identification: Alten: TK-801A City: Mead Nebraska State: Alten, LLC Company:

Type of Tank: Vertical Fixed Roof Tank

Anhydrous Ethanol Storage Tank Description:

Tank Dimensions

Shell Height (ft): 16.00 15.50 Diameter (ft): Liquid Height (ft): 16.00 Avg. Liquid Height (ft): Volume (gallons): 15.00 22,600.00 Tumovers: 533.19 Net Throughput(gal/yr): 12,050,000.00 Ν

Is Tank Heated (y/n):

Paint Characteristics

Shell Color/Shade: White/White Good **Shell Condition** White/White Roof Color/Shade: Roof Condition: Good

Roof Characteristics

Type: Cone Height (ft) 0.00 Slope (ft/ft) (Cone Roof) 0.20

Breather Vent Settings

Vacuum Settings (psig): -0.03 Pressure Settings (psig) 0.03

Meterological Data used in Emissions Calculations: Norfolk, Nebraska (Avg Atmospheric Pressure = 13.92 psia)

TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

Alten: TK-801A - Vertical Fixed Roof Tank

	Daily Liquid Surf. Bull		Liquid Bulk Temp	Vapo	or Pressure	(psia)	Vapor Liquid Mol. Mass			Mol.	Basis for Vapor Pressure		
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Ethyl alcohol	All	50.25	44.60	55.91	48.45	0.4673	0.3806	0.5709	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d Emissions Report - Summary Format Individual Tank Emission Totals

Emissions Report for: Annual

Alten: TK-801A - Vertical Fixed Roof Tank

	Losses(lbs)							
Components	Working Loss	Breathing Loss	Total Emissions					
Ethyl alcohol	1,377.09	21.41	1,398.50					

TANKS 4.0.9d

Emissions Report - Summary Format Tank Indentification and Physical Characteristics

Identification

User Identification:

Alten: TK-801B

City: State: Mead Nebraska

Company:

Alten, LLC

Type of Tank:

Vertical Fixed Roof Tank

Description:

Anhydrous Ethanol Storage Tank

Tank Dimensions

Shell Height (ft): Diameter (ft):

16.00

Liquid Height (ft):

15.50 16.00

Avg. Liquid Height (ft):

15.00

Volume (gallons):

22,600.00

Turnovers:

533.19

Net Throughput(gal/yr):

Is Tank Heated (y/n):

12,050,000.00

Paint Characteristics

Shell Color/Shade:

White/White

Shell Condition

Good

Roof Color/Shade:

White/White

Roof Condition:

Good

Roof Characteristics

Type:

Cone

Height (ft)

0.00

Slope (ft/ft) (Cone Roof)

0.20

Breather Vent Settings

Vacuum Settings (psig):

-0.03

Pressure Settings (psig)

0.03

Meterological Data used in Emissions Calculations: Norfolk, Nebraska (Avg Atmospheric Pressure = 13.92 psia)



TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

Alten: TK-801B - Vertical Fixed Roof Tank

	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp Vapor Pressure (psia)			Vapor Liquid Vapor Mol. Mass Mass			Mol.	Basis for Vapor Pressure			
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations	·.
Ethyl alcohol	All	50.25	44.60	55.91	48.45	0.4673	0.3806	0.5709	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52	

TANKS 4.0.9d Emissions Report - Summary Format Individual Tank Emission Totals

Emissions Report for: Annual

Alten: TK-801B - Vertical Fixed Roof Tank

	Losses(lbs)							
Components	Working Loss	Breathing Loss	Total Emissions					
Ethyl alcohol	1,377.09	21.41	1,398.50					

TANKS 4.0.9d

Emissions Report - Summary Format Tank Indentification and Physical Characteristics

Identification

User Identification: Alten: TK-803
City: Mead
State: Nebraska
Company: Alten, LLC

Type of Tank: Vertical Fixed Roof Tank

Description: Off-Spec Tank (190 Proof Ethanol)

Tank Dimensions

 Shell Height (ft):
 16.00

 Diameter (ft):
 15.50

 Liquid Height (ft):
 16.00

 Avg. Liquid Height (ft):
 15.00

 Volume (gallons):
 22,600.00

 Tumovers:
 1,066.37

 Net Throughput(gal/yr):
 24,100,000.00

Is Tank Heated (y/n):

Paint Characteristics

Shell Color/Shade: White/White
Shell Condition Good
Roof Color/Shade: White/White
Roof Condition: Good

•

Roof Characteristics

 Type:
 Cone

 Height (ft)
 0.00

 Slope (ft/ft) (Cone Roof)
 0.20

Breather Vent Settings

Vacuum Settings (psig): -0.03
Pressure Settings (psig) 0.03

Meterological Data used in Emissions Calculations: Norfolk, Nebraska (Avg Atmospheric Pressure = 13.92 psia)

TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

Alten: TK-803 - Vertical Fixed Roof Tank

Mixture/Component	Month	Ten	aily Liquid S perature (d Min.		Liquid Bulk Temp (deg F)	Vapo Avg.	or Pressure Min.	(psia) Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Ethyl alcohol	All	50.25	44.60	55.91	48.45	0.4673	0.3806	0.5709	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d Emissions Report - Summary Format Individual Tank Emission Totals

Emissions Report for: Annual

Alten: TK-803 - Vertical Fixed Roof Tank

	- Losses(lbs)					
Components	Working Loss	Breathing Loss	Total Emissions			
Ethyl alcohol	2,406.61	21.41	2,428.02			

TANKS 4.0.9d

Emissions Report - Summary Format Tank Indentification and Physical Characteristics

Identification

User Identification:

Alten: TK-808

City: State: Mead Nebraska

Company:

Alten, LLC

Type of Tank: Description:

Internal Floating Roof Tank

Denaturant Storage Tank

Tank Dimensions

Diameter (ft):

15.50

Volume (gallons):

22.600.00

Turnovers:

53.32

Self Supp. Roof? (y/n):

No. of Columns: Eff. Col. Diam. (ft): 1.00 1.00

Paint Characteristics

Internal Shell Condition:

Light Rust

Shell Color/Shade:

White/White

Shell Condition

Good

Roof Color/Shade:

White/White

Roof Condition:

Good

Rim-Seal System

Primary Seal:

Mechanical Shoe

Secondary Seal None

Deck Characteristics

Deck Fitting Category:

Typical

Deck Type:

Welded

Deck Fitting/Status

Quantity

Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed Automatic Gauge Float Well/Unbolted Cover, Ungasketed Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. Ladder Well (36-in. Diam.)/Sliding Cover, Ungasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.) Weighted Mech. Actuation, Gask.

Meterological Data used in Emissions Calculations: Norfolk, Nebraska (Avg Atmospheric Pressure = 13.92 psia)

TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

Alten: TK-808 - Internal Floating Roof Tank

			aily Liquid S perature (d		Liquid Bulk Temp Vapor Pressure (psia)		Vapor Liquid Vapor Mol. Mass Mass Mol.		Mol.	Basis for Vapor Pressure			
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Gasotine (RVP 10)	All	50.25	44.60	55.91	48.45	4.2771	N/A	N/A	66.0000			92.00	Option 4: RVP=10, ASTM Slope=3

TANKS 4.0.9d Emissions Report - Summary Format Individual Tank Emission Totals

Emissions Report for: Annual

Alten: TK-808 - Internal Floating Roof Tank

							
	Losses(lbs)						
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions		
Gasoline (RVP 10)	543.03	15.61		0.00	2,047.58		

TANKS 4.0.9d

Emissions Report - Summary Format Tank Indentification and Physical Characteristics

Identification

User Identification: Alten: TK-810 City: Mead State: Nebraska Company: Alten, LLC

Internal Floating Roof Tank Type of Tank: Denatured Ethanol Storage Tank Description:

Tank Dimensions

Diameter (ft): 47.75 Volume (galions): 535,830.00 Tumovers: 44.98 Self Supp. Roof? (y/n): No. of Columns: 1.00 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Light Rust Internal Shell Condition: Shell Color/Shade: White/White **Shell Condition** Good White/White Roof Color/Shade: Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe

Secondary Seal None

Deck Characteristics

Deck Fitting Category: Typical Deck Type: Welded

Deck Fitting/Status

Quantity Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed Automatic Gauge Float Well/Unbolted Cover, Ungasketed Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. Ladder Well (36-in. Diam.)/Sliding Cover, Ungasketed Roof Leg or Hanger Well/Adjustable Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open Vacuum Breaker (10-in. Diam.) Weighted Mech. Actuation, Gask.

Meterological Data used in Emissions Calculations: Norfolk, Nebraska (Avg Atmospheric Pressure = 13.92 psia)

TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

Alten: TK-810 - Internal Floating Roof Tank

			Tem	ily Liquid S perature (d	eg F)	Liquid Bulk Temp	•	r Pressure	. ,	Vapor Mol.	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure
Mixture/Component	•	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight.	Fract.	Fract.	Weight	Calculations
Denatured ethanol Ethyl alcohol Gasoline (RVP 10)		All .	50.25	44.60	55.91	48.45	0.5254 0.4673 4.2771	N/A N/A N/A	N/A N/A N/A	48.5442 46.0700 66.0000	0.9700 0.0300	0.8312 0.1688	46.77 46.07 92.00	Option 2: A=8.12187, B=1598.673, C=226.726 Option 2: A=8.321, B=1718.21, C=237.52 Option 4: RVP=10, ASTM.Slope=3

TANKS 4.0.9d Emissions Report - Summary Format Individual Tank Emission Totals

Emissions Report for: Annual

Alten: TK-810 - Internal Floating Roof Tank

·	Losses(lbs)								
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions				
Denatured ethanol	129.32	114.09	140.93	0.00	384.35				
Ethyl alcohol	107.50	110.67	117.14	0.00	335.31				
Gasoline (RVP 10)	21.83	3.42	23.79	0.00	49.04				

TANKS 4.0.9d Emissions Report - Summary Format Total Emissions Summaries - All Tanks in Report

Emissions Report for: Annual

Tank Identification				Losses (lbs)
Alten: TK-801A	Alten, LLC	Vertical Fixed Roof Tank	Mead, Nebraska	1,398.50
Alten: TK-801B	Alten, LLC	Vertical Fixed Roof Tank	Mead, Nebraska	1,398.50
Alten: TK-803	Alten, LLC	Vertical Fixed Roof Tank	Mead, Nebraska	2,428.02
Alten: TK-808	Alten, LLC	Internal Floating Roof Tank	Mead, Nebraska	2,047.58
Alten: TK-810	Alten, LLC	Internal Floating Roof Tank	Mead, Nebraska	384.35
Total Emissions for all Tan	ks:			7,656.93

BACKUP DOCUMENTATION

TEST DATA

EXECUTIVE SUMMARY

E3 Biofuels Mead, LLC - Mead, Nebraska American Engineering Testing, Inc. October 16-19, 2007

Emissions testing were conducted on the Fermentation/Distillation scrubber, Boiler, Grain Receiving baghouse, and Hammermill baghouse on October 16-19, 2007. The results are summarized below:

Emission Unit Tested	Pollutant	Emission Unit Limit	Test Result
	VOCs	< 7.0 Lbs/Hr Removal efficiency – No requirement	13.54 Lbs/Hr 89.9 % Removal
Fermentation/Distillation Scrubber (EP-6)	НАР	< 10 individual < 25 total Tons/year facility-wide Removal efficiency – No requirement	2.92 Lbs/Hr 36.2 % Acetaldehdye Removal
	NO_X	No requirement	5.73 Lbs/Hr
Boiler (EP-4)	Ammonia Content of Biogas	No Requirement	< 0.38 PPMV
Grain Receiving Baghouse (EP-I)	PM/PM ₁₀	0.62 Lbs/Hr	0.311 Lbs/Hr
Hammermill Baghouse (EP-3)	PM/PM ₁₀	0.19 Lbs/Hr	0.0466 Lbs/Hr

Fermentation/ Distillation Scrubber Emissions - October 19, 2007

	Run #1	Run #2	Run #3	<u>Average</u>
Acetaldehyde, Lbs/Hr	2.70	3.31	2.75	2.92
Acetic Acid, Lbs/Hr	< 0.079	< 0.150	< 0.131	< 0.120
Acrolein, Lbs/Hr	< 0.262	< 0.560	< 0.490	< 0.437
Ethanol, Lbs/Hr	7.66	12.45	10.10	10.07
Ethyl Acetate, Lbs/Hr	0.429	0.660	0.577	0.555
Formaldehyde, Lbs/Hr	< 0.056	< 0.075	< 0.066	< 0.066
Formic Acid, Lbs/Hr	< 0.026	< 0.046	< 0.040	< 0.037
Methanol, Lbs/Hr	< 0.120	< 0.200	< 0.175	< 0.165
Total Detected VOCs, Lbs/hr	10.79	16.42	13.42	13.54 (1)
Scrubber Makeup Water Flow Rate, (gpm)	16	16	16	16
Beer Feed Flow Rate, (gpm)	330	320	300	317
Ethanol Flow Rate (gpm)	33	· 33	33	33

^{(1) 13.54} Lbs/Hr represents the sum of the detected volatile organic compounds.

EXECUTIVE SUMMARY (continued)

Boiler Emissions - October 18, 2007	,	· · :		
	<u>Run #1</u>	Run #2	Run #3	<u>Average</u>
NO _X , Lbs/Hr	6.09	5.80	5.30	5.73
Boiler 1 Firing Rate (%)	49	50	44	48
Boiler 2 Firing Rate (%)	33	36	36	35
Boiler 1 Biogas Flow (SCFM)	810	810	810	810
Biogas Ammonia Concentration (PPMV)	< 0.28	< 0.29	< 0.28	< 0.38
Grain Receiving Baghouse Emissions - Oc	ctober 17, 2007			
Filterable Particulate Emission Results	Run #1	Run #2	<u>Run #3</u>	Average
Particulate Mass Rate, lbs/hr:	0.137	0.0859	0.0644	0.0958
Organic Condensibles Emission Results				
Particulate Mass Rate, lbs/hr:	0.0254	0.0480	0.0550	0.0428
Inorganic Condensibles Emission Results				
Particulate Mass Rate, lbs/hr:	0.172	0.174	0.171	0.172
Total Particulate Emission Results				
Particulate Mass Rate, lbs/hr:	0.335	0.307	0.290	0.311
Baghouse Pressure Drop, in. H2O	2.5	2.5	2.5	2.5
Hammermill Baghouse Emissions - October	er 16, 2007			
Filterable Particulate Emission Results	<u>Run #1</u>	<u>Run #2</u>	Run #3	Average
Particulate Mass Rate, lbs/hr:	0.0249	0.0252	0.0431	0.0311
Organic Condensibles Emission Results	1			
Particulate Mass Rate, lbs/hr:	0.00240	0.00259	0.00339	0.00279
Inorganic Condensibles Emission Results	į			٠
Particulate Mass Rate, lbs/hr:	0.0154	0.0125	0.0102	0.0127
Total Particulate Emission Results	: \ V			
Particulate Mass Rate, lbs/hr:	0.0428	0.0402	0.0567	0.0466
Baghouse Pressure Drop, in. H2O	3.4	3.4	3.5	3.4

Table 3-1: Fermentation/Distillation Scrubber Testing Summary

VOC/HAP Emissions	Run #1	Run #2	Run #3	Average
Date	10/19/07	10/19/07	10/19/07	
Time	10:52-14:52	15:09-19:09	19:25-23:25	
Avg Volumetric Flow (SCFM)	1200	1600	1400	1400
Scrubber Makeup Water Flow (GPM)	16	16	16	16
Acetaldehyde (PPMV)	327	301	286	305
Acetaldehyde (LB/HR)	2.70	3.31	2.75	2.92
Acetic Acid (PPMV)	< 7.0	< 10	< 10	< 9.0
Acetic Acid (FFINV) Acetic Acid (LB/HR)	< 0.079	< 0.150	< 0.131	< 0.120
Accile Acid (EB/HK)	~ 0.079	~ 0.130	~ 0.131	~ 0.120 ,,;
Acrolein (PPMV)	< 25	< 40	< 40	< 35
Acrolein (LB/HR)	< 0.262	< 0.560	< 0.490	< 0.437
Ethanol (PPMV)	888	1082	1003	991
Ethanol (LB/HR)	7.66	12.45	10.10	10.07
		•		
Ethyl Acetate (PPMV)	26	30	30	29
Ethyl Acetate (LB/HR)	0.429	0.660	0.577	0.56
Formaldehyde (PPMV)	< 10	< 10	< 10	< 10
Formaldehyde (LB/HR)	< 0.056	< 0.075	< 0.066	< 0.066
· Crimitally de (EDITIN)	- 0.050			- 0.000
Formic Acid (PPMV)	< 3.0	< 4.0	< 4.0	< 3.7
Formic Acid (LB/HR)	< 0.026	< 0.046	< 0.040	< 0.037
Methanol (PPMV)	< 20	· < 25	< 25	< 23
Methanol (LB/HR)	< 0.120	< 0.200	< 0.175	< 0.165
Total Detected VOC (LB/HR)	10.79	16.42	13.42	13.54
·				
VOC Removal Efficiency	Run #1	Run #2	Run #3	Average
Date	10/19/07	10/19/07	10/19/07	
Time	11:00-12:00	12:25-13:25	15:25-16:25	• •
Avg Volumetric Flow (SCFM)	1200	1200	1600	1333
Scrubber Makeup Water Flow (GPM)	16	16	16	16
Scrubber Inlet, as carbon (LB/HR)	47.7	50.1	63.6	53.8
Scrubber Outlet, as carbon (LB/HR)	4.78	5.16	6.37	5.44
Removal Efficiency (%)	90.0	89.7	90.0	89.9
W.D.D.		÷		
HAP Removal Efficiency Date	Run #1			
_ ·	10/19/07	· ·		5
Time Avg Volumetric Flow (SCFM)	19:25-23:25	,		
Scrubber Makeup Water Flow (GPM)	1400 16	•		•
Scrubber Makeup Water Flow (OPM)	10			
Scrubber Inlet, Acetaldehyde (LB/HR)	4.31			
Scrubber Outlet, Acetaldehyde (LB/HR)	2.75			
Removal Efficiency (%)	36.2			

Table 3-2: Boiler Emissions Summary

	·			
Volumetric Air Flow Data	<u>Run #1</u>	Run #2	Run #3	<u>Average</u>
Stack Temperature, °F	399	392	394	395
Stack Oxygen, %	4.3	4.2	4.2	4.2
Stack Carbon Dioxide, %	12.3	12.6	12.2	12.4
Moisture, %	16.4	18.9	16.6	17.3
Stack Flow Rate, DSCFM	15,900	15,000	14,600	15,167
	j Ij			,
NO _x Emission Results	<u>Run #1</u>	<u>Run #2</u>	Run #3	Average
NO _x concentration, ppmv	53.4	53.9	50.6	52.6
NO _X Mass Rate, lbs/hr:	6.09	5.80	5.30	5.73
	ļ			
Biogas Ammonia Content	Run #1	<u> Run #2</u>	Run #3	<u>Average</u>
Sample Volume, liters	30	15	33	26
Ammonia collected, ug	< 6.0	< 6.3	< 6.5	< 6.3
Ammonia concentration, ppmv	< 0.28	< 0.59	< 0.28	< 0.38
	es di	-		
Boiler Operating Parameters	<u>Run #1</u>	<u>Run #2</u>	<u>Run #3</u>	Average
Boiler 1 Firing Rate (%)	49	50	44	48
Boiler 2 Firing Rate (%)	33	36	36 810	35 810
Boiler 1 Biogas Flow (SCFM)	810	810	810	010

Table 3-3:
Grain Receiving Baghouse Outlet Emissions Summary

Particulate Matter (PM) Results	•				
Air Flow Data	<u>Run #1</u>	<u>Run #2</u>	Run #3		Average
Stack Temperature, °F	69	65	65		66
•	20.9	20.9	20.9		20.9
Stack Oxygen, %	0.03	0.03	0.03	O	0.03
Stack Carbon Dioxide, %	2.0	1.6	1.7	. 4	1.8
Moisture, %	12,900	13,500	13,200		13,200
Stack Flow Rate, DSCFM	102.7	100.5	102.0		101.7
Isokinetic Variation, %	102.7				
Filterable Particulate Emission Results				•	1
Particulate Concentration, grains/dscf:	0.00124	0.000742	0.000569	1 2	0.000850
Particulate Concentration, grams decr. Particulate Mass Rate, lbs/hr:	0.137	0.0859	0.0644	. ,	0.0958
Particulate Mass Rate, 108/111.	5112 7				
Organic Condensibles Emission Results					•
Particulate Concentration, grains/dscf:	0.000230	0.000415	0.000486		0.000377
Particulate Mass Rate, lbs/hr:	0.0254	0.0480	0.0550		0.0428
Fairiculate Wass Rate, 103/11.	,		· ·		
Inorganic Condensibles Emission Results	•	•			
Particulate Concentration, grains/dscf:	0.00156	0.00150	0.00151		0.00152
Particulate Mass Rate, lbs/hr:	0.172	0.174	0.171	•	0.172
1 diliculate ivides ivers, ionizi	•				,
Total Particulate Emission Results			• •	•	· · · · · · · · ·
Particulate Concentration, grains/dscf:	0.00303	0.00266	0.00257	:	0.00275
Particulate Mass Rate, lbs/hr:	0.335	0.307	0.290		0.311
i atticulate inteod itato, iourna.				•	
Baghouse Pressure Drop, in. H2O	2.5	2.5	. 2.5	•	2.5
Dagnouse 1 tename Drop, na 1120					

Table 3-4:
Hammermill Baghouse Outlet Emissions Summary

Particulate Matter (PM) Results	5 4			
Air Flow Data	Run #1	<u>Run #2</u>	Run #3	Average
Stack Temperature, °F	71	72	72	72
Stack Oxygen, %	20.9	20.9	20.9	20.9
Stack Carbon Dioxide, %	0.03	0.03	0.03	0.03
Moisture, %	2.8	3.0	2.0	2.6
Stack Flow Rate, DSCFM	900	800	800	833
Isokinetic Variation, %	99.7	100.1	97.9	99.2
Filterable Particulate Emission Results	1			
Particulate Concentration, grains/dscf:	0.00323	0.00367	0.00628	0.00439
Particulate Mass Rate, lbs/hr:	0.0249	0.0252	0.0431	0.0311
Organic Condensibles Emission Results			,	•
Particulate Concentration, grains/dscf:	0.000311	0.000378	0.000495	0.000395
Particulate Mass Rate, lbs/hr:	0.00240	0.00259	0.00339	0.00279
Inorganic Condensibles Emission Results				
Particulate Concentration, grains/dscf:	0.00200	0.00182	0.00149	0.00177
Particulate Mass Rate, lbs/hr:	0.0154	0.0125	0.0102	0.0127
Total Particulate Emission Results		•	·	
Particulate Concentration, grains/dscf:	0.00554	0.00587	0.00827	0.00656
Particulate Mass Rate, lbs/hr:	0.0428	0.0402	0.0567	.0.0466
Baghouse Pressure Drop, in. H2O	3.4	3.4	3.5	. 3.4

COPY OF VARIANCE REQUEST



January 17, 2013

Mr. Michael Linder Nebraska Department of Environmental Quality Attn: Legal Division 1200 N Street, Suite 400 Lincoln, NE 68509-8922

RE: Greenhouse Gas (GHG) Deferral Variance Request

AltEn, LLC

NDEQ Facility ID#: 84069

Dear Mr. Linder:

Please find enclosed a Variance Application for AltEn, LLC seeking approval to defer CO₂ emissions from the fermentation scrubber located at their facility. In 2012, Shelley Schneider of the Air Quality Division of the NDEQ, sent a correspondence advising NDEQ's proposal to adopt the federal deferral for CO₂ emissions generated by biogenic sources was denied causing Nebraska Air Quality Regulations to be stringent than the Federal Program.

To avoid the imposition of this requirement in AltEn's permit modification application (to be submitted in the near future), it was advised to initiate the process of adding a variance condition to the permit to allow AltEn to conform to the CO₂ deferral. The Variance Request Form is being submitted to allow AltEn to adopt the deferral of CO₂ emissions generated by biogenic sources (i.e. fermentation), allowing the facility to remain a Class II Operating Source.

Please do not hesitate to contact either myself at (319) 360-2127 or our consultant, Ms. Lauren Taylor of ERI Solutions at (316) 927-4262 if you have any questions or require any additional information.

Sincerely,

Jim Stewart Plant Manger AltEn, LLC

C.c.: L. Taylor, ERI Solutions, Inc.



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IIS#_				

AIR QUALITY PERMITS SECTION * 1200 N STREET, SUITE 400 * LINCOLN, NE 68509-8922 Tel: (402) 471-2189 * FAX: (402) 471-2909 *CONSTRUCTION PERMIT HOTLINE: (877) 834-0474

WEB SITE: www.ndeg.state.ne.us

VARIANCE APPLICATION SEEKING AUTHORITY TO INITIATE CONSTRUCTION PRIOR TO AIR PERMIT ISSUANCE

Title 129 – Air Quality Regulations, require certain new, reconstructed, or modified sources of air pollution to obtain an air quality construction permit before construction activities may begin. Title 129 Chapters 17 and 19 detail when a permit must be obtained. Under extraordinary circumstances, the Director may by variance allow you, at your own risk, to begin prior to obtaining a permit. You may apply for a variance under Neb. Rev. Stat. §81-1513 by submitting this form. The variance is not a permit. Sources constructing are not released from the obligation to ultimately obtain a permit.

THE DEPARTMENT RESERVES THE APPLICANTS AND THE DE								
	•	LEASE PRINT II	N BLACK IN	K OR TYPE	ALL INFORMATION	ON)		
FACILITY INFOR			į				•	
Name of Facility _	AltEn, LLC		<u> </u>				·	
Address of Facility	1344 County	Road 10			Mead	`.	NE	68041
	Street, Rui	ral Route of	r P.O. Bo	x	•	City	State	Zip
Legal Description	,,,	Section T	14 N ownship	08 Range	XE or	W <u>Sau</u>	nders	County
Distance to Nearest There are two (2)								l Guard
Training facility or	ne (1) mile sou	th of the	facility	<i>/</i> .				•
Facility Contact Info	ormation Jim S	Stewart	l'1		Pla	nt Mana	ger	
Phone No(s). ()	Nam	e (319)	360	2127	jstev	<i>Title</i> wart@mrgke	c.com
	(Work)	•	1	(Othe	r)	· (E	mail address)	
CONSTRUCTION variance): Deferral			le .					
			:					
OTHER INFORM	ATION: PLE	ASE ANS	SWER 7	THE FO	OLLOWING	G QUEST	ΓIONS:	•
Have you submitted		permit ap	plicatio	on?	Yes XNo	NOTE: Fa	on permit modi	bmitting a fication in the

Have you received complaints from neighbors regarding y	
If yes, what is the nature of the complaints an	nd how have you resolved these issues?
lease explain the reasons you are unable to wait to const	ruct until you receive your permit?
Deferral of CO2 emissions generated by bioger	nic sources enables AltEn to remain a Class II
Source.	
Do you agree not to operate the items that you construction or N/A - the facility currently has a control to include equipment not previous	truct by virtue of a variance until after you received onstruction permit. A modification will be submitted sly permitted.
A copy of the planned construction schedule is included v	with this application. Yes N/A - the facility is an existing operating source.
character and degree of injury to or interference with the and economic value of the source of the air, water, or large involved; and (d) The technical practicability and emissions or discharges resulting from the source. Please	ast take into consideration at least the following: (a) The health and physical property of the people; (b) The social pollution; (c) The question of priority of location of the economic reasonableness of reducing or eliminating the provide details on circumstances you wish the Director the test of the supplement the application with additional materials proposed adoption of the federal deferral of
CO2 emissions generated by biogenic sources	and requested submittal of the variance to
orovide coverage under a condition in the permi	it to allow conformation to the Federal Rule
and deferral.	
	
Do you understand that a variance, if granted, must not by will ultimately be issued? XYes \sum_No	be construed as a guarantee that an air quality constructio
Do you agree to assume all risks that your construction require that you retrofit any installations to meet the perm	n permit may be denied or, if issued, that the permit manit requirements? XYes \sum No
RESPONSIBLE OFFICIAL CERTIFICATION O	OF TRUTH, ACCURACY, & COMPLETENESS
	lete to the best of my knowledge and belief and that, undesign on behalf of the facility for which this request is being
Jim Stewart	Plant Manager
Printed or Typed Name of Responsible Official	Title
N	
Notarized Signature of Responsible Official	Date of Signature

AIR INSPECTION LETTER





Dave Heineman Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY
Michael J. Linder

Director
Suite 400, The Atrium
1200 'N' Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Phone (402) 471-2186
FAX (402) 471-2909
website: www.deg.state.ne.us

AltEn, LLC Scott Asner 420 Nichols Road STE 205 Kansas City, MO 64112

RE: January 5, 2012, Air Quality focused evaluation AltEn, LLC, 1344 County Road 10 Mead, NE 68041-4036 FID# 84069

Dear Mr. Asner:

On January 5, 2012, this department conducted an Air Quality focused inspection at the above facility. A copy of the inspection report is enclosed for your reference. The department identified the following potential permitting concerns as a result of this inspection.

- 1. The replacement for boiler B-2 (damaged by an explosion) should be evaluated by the Permitting Section to ensure it meets the sizing of the original construction permit (see observation 1.a. of the inspection report).
- 2. The auxiliary boiler should be evaluated for inclusion in the construction permit modification (see observation 1.c. of the inspection report).
- 3. You must have as-built drawings available for review by inspectors (see observation 1.g. of the inspection report).
- 4. Remove from the construction permit the 275 HP diesel engine (see observation 1.n. of the inspection report).
- 5. The scalper / day tank baghouse should be considered for inclusion in the construction permit (see observation 3.b. of the inspection report).
- 6. Construction permit condition XIII(b)(1) should be considered for modification to identify the correct type of grain cleaning equipment at the site (see observation section, note 4 of the inspection report).
- 7. Construction permit condition XIII(b)(1) should be considered for modification to correctly identify the equipment controlled by the mill baghouse, EP-3 (see observation section, note 4 of the inspection report).

- 8. The installation of an RTO must be evaluated for construction permit requirements prior to installing the unit.
- 9. Obtain a current site diagram identifying the re-platted site boundaries, ownership, and the location of all facility equipment and emission points (see observations 3.f. and 4 of the inspection report).

Submit a permit application to the attention of Mr. Clark Smith, Permitting Section Supervisor, at least 30-days prior to initiating operation of the facility. Direct all permit-related comments to Mr. Smith at (402) 471-4204.

Respectfully,

Ken Almquist, Unit Supervisor Inspection and Compliance Unit

Air Quality Division

Enclosure

copy: Mr. J. Stewart, AltEn, LLC, Mead

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR CONSTRUCTION PERMIT MODIFICATION APPLICATION

FOR :

ALTEN, LLC Mead, Nebraska Facility ID: 84069

PREPARED FOR:
AltEn, LLC
1344 County Road 10
Mead, NE 68041

January 2013

SERT
SOLUTIONS INC:

Fort Collins Office: 3555 Stanford Road, Suite 200 | Fort Collins, CO 80525 | (970) 206-4480